

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1689.—Vol. XXXVIII.

LONDON, SATURDAY, JANUARY 4, 1868.

(WITH SUPPLEMENT) {STAMPED ...SIXPENCE UNSTAMPED...FIVEPENCE

**MR. JAMES CROFTS, STOCK AND SHAREBROKER,**  
No. 1, FINCH LANE, CORNHILL.

HOLDERS of mining shares difficult of sale in the open market may find purchasers for the same through Mr. CROFTS' agency. Also parties requiring advice how to act in the disposal or abandonment of doubtful mining stocks may profitably avail of Mr. CROFTS' long experience on the market in all cases of doubt or difficulty, legal or otherwise.

Mr. CROFTS strongly recommends, during the epoch of low prices, the following dividend mines for investment:—East Caradon, East Wheel Lovell, Great Wheal Vor, Herodfoot, Marke Valley (specially), South Caradon, Wheal Frances, Tincroft, West Chiverton, West Seton, Wheal Bassett, Wheal Kitty (St. Agnes), Wheal Mary Ann (specially), Wheal Seton (at the present low price).

Bankers: National Bank of Scotland, 37, Nicholas-lane, E.C.

**MR. JOHN BUMPUS, 44, THREADNEEDLE STREET,**  
has FOR SALE the following shares, free of commission:—  
20 Bryn Gwilog, 24s. 25 E. Carn Brea, 46s. 6d. 35 Prince of Wales, 54s.  
20 Chiverton, 41 18s. 9d. 70 Frontino, 17s. 9d. 50 Redmoor, 2s. 6d.  
20 Chontales, 43 1/2. 10 Great Laxey, 17 1/2. 30 South Crofty, 15 1/2.  
45 Caldbeck Falls, 10s. 6d. 25 Gt. No. Laxey, 15s. 6d. 100 So. Grenville, 3s. 3d.  
15 Chiverton Moor, 43 1/2. 30 Gt. So. Chiverton, 11s. 9d. 25 So. Condurrow, 12s.  
25 Carn Camborne, 11s. 10 Hingston Down, 22 1/2. 5 Tincroft, 41 1/2.  
10 Clifford, 46. 30 Lovell Consols, 11s. 3d. 5 West Rose Down, 22 1/2.  
50 Dale, 2s. 6d. 25 Marke Valley, 43 1/2. 50 W. Wh. Kitty, 14s.  
50 Drake Walls, 12s. 20 Mining Assoc., 18s. 5 W. Chiverton, 46 1/2.  
50 Don Pedro, 42 1/2 prem. 50 No. Treskerby, 31s. 5 W. Trelawny, 46 1/2.  
25 East Russell, 31s. 9d. 50 North Basset, 2s. 6d. 2 Wheal Seton, 48 1/2.  
15 E. Wh. Lovell, 48 1/2. 20 North Crofty, 22 1/2. 20 Wh. Grenville, 29s. 3d.  
30 East Caradon, 45. 15 No. Chiverton, 44 1/2. 40 W. Drake Walls, 12s. 6d.  
20 Prosper United, 42.  
Cash advanced on mining shares.

**GUIDE TO INVESTORS.—MR. LEEAN'S STOCK, SHARE, AND FINANCE REGISTER** for January, contains a comprehensive review of the Stock and Share Markets of the past year; a list of all the dividends paid in December; a selection of Investments paying 10 to 16 per cent.; and such information as is necessary to guide intending investors. —6d. per copy, or 5s. annually, post free.  
Published by Mr. BAKER LEEAN, at his offices, 11, Royal Exchange, London.

**MR. WILLIAM WARD,**  
STOCK AND SHAREDEALER,  
No. 29, THREADNEEDLE STREET, LONDON, E.C.

**MR. JOHN BATTERS, STOCK AND MINING SHAREBROKER,**  
13, THROGMORTON STREET, LONDON, E.C.

**MR. WILLIAM SEWARD, STOCK AND SHAREDEALER,**  
19, THROGMORTON STREET, LONDON, E.C.

**MR. THOMAS SPARGO, STOCK AND SHAREDEALER,**  
224 & 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

**MESSERS. FREDERICK GILL AND CO., STOCK AND SHAREDEALERS,**  
ST. CLEMENT'S HOUSE, CLEMENT'S LANE, LONDON, E.C., TRANSACT BUSINESS in all MINING STOCKS and SHARES at closest market net prices, either for cash or account.

Established Fourteen Years.

**MESSERS. WARD AND JACKMAN, SHAREDEALERS,**  
CUSHION COURT, OLD BROAD STREET, CITY, E.C.  
Members of the Mining Exchange, London.  
Every description of MARKETABLE SHARES BOUGHT or SOLD, either for immediate settlement or account, at the closest dealing prices.  
Messrs. WARD and JACKMAN will forward a correct list of CLOSING PRICES GRATIS on application.  
Bankers: London and Westminster, Lothbury.

**MR. EDWARD BREWIS, PALMERSTON BUILDINGS,**  
34, OLD BROAD STREET, LONDON, E.C., has FOR SALE, free of commission:—45 Anglo-Brazilian; 5 Maes-y-Safu; 15 Westminster; 3 West Chiverton; 15 Don Pedro Gold; 2 Chiverton; 2 Minera Lead (Limited); 10 North Crofty; 10 Great Laxey; 5 Marke Valley; 3 Buller; 15 East Caradon; 10 Clifford Amalgamated; 25 Chontales; 25 Old Westminster; 25 Frontino; 40 South Condurrow; 5 East Seton; 30 East Bottle Hill; 10 Rose and Chiverton; 40 North Treskerby; 20 Colquhoun and Callington; 10 Rhosmor.  
N.B.—All of these can be subdivided to suit the convenience of purchasers, and many may be had cheap, considering their dividends and prospects.

**GEORGE RICE, STOCK AND SHAREDEALER, 78, OLD BROAD STREET, LONDON, E.C.** (Member of the Mining Exchange). (25 years' experience). TRANSACTS BUSINESS in MINING SHARES, at close prices.  
Money advanced on mining shares.  
Jan. 3, 1868. Bankers: Bank of England.

**MR. J. B. REYNOLDS, STOCK AND SHAREDEALER,**  
70 and 71, BISHOPSGATE STREET WITHIN, LONDON, E.C., has FOR SALE a very valuable selection of mining securities. He is also a BUYER of most descriptions of stock, and believes that a selection can now be made for investment which before the year 1868 closes will yield a very handsome profit to fortunate proprietors. Mr. REYNOLDS will pay prompt attention to all enquiries or commands, and will deal, for immediate delivery and cash payment, in any shares of a bona fide character.  
Bankers: City Bank.  
Jan. 4, 1868. Established Eleven years.

**MR. THOMAS THOMPSON, MINING OFFICES,**  
12, OLD JEWRY CHAMBERS, LONDON, E.C.  
Mr. THOMPSON recommends the immediate purchase of Westminster, Ebury, and East Snarell shares.  
The presence of a large body of sand in the lode at Westminster is a very favourable feature. In these mines it never fails to indicate the neighbourhood of a large body of lead ore.

**SHARES FOR SALE IN THE FOLLOWING MINES, cash:—**  
5 East Caradon, 44 1/2. 10 Wh. Grenville, 29s. 3d. 5 Chiverton, 45 6s. 3d.  
10 North Crofty, 22 1/2. 20 Prince of Wales, 54s. 25 Drake Walls, 12s. 6d.  
10 North Downs, 14s. 3d. 15 E. Rosewarne, 6s. 6d. 5 Marke Valley, 43 1/2.  
No. Treskerby, 30s. 6d. 10 East Russell, 31s. 9d. 20 Kitty (St. Agnes).  
Apply personally, or by letter, to JOHN WM. HUTCHINSON, 31, Throgmorton-street, City, E.C.  
WANTED TO PURCHASE, for cash, shares in Seton, Cargoll, Clifford, Chontales, and Don Pedro. Sellers state number and lowest price.

**MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S, BISHOPSGATE STREET, LONDON, E.C.** (Established 13 years), has FOR SALE the FOLLOWING SHARES, at net prices:—  
50 Anglo-Brazilian, 11s. 30 Bryn Gwilog, 22s. 3d. 2 Carn Brea, 42 1/2.  
20 Chiverton, 41 18s. 9d. 15 Chiverton, 45 6s. 3d. 15 Chiv. Moor, 45 12s. 9d.  
5 Clifford, 46. 20 Dyllife, 14 1/2. 20 Don Pedro, 42 13s. 9d.  
40 Drake Walls, 10s. 6d. 5 East Caradon, 45. 15 East Carn Brea, 42 1/2.  
20 E. Grenville, 42 1s. 3d. 20 E. Gunnislake, 40s. 10 East Lovell, 45 8s. 9d.  
50 East Rosewarne, 7s. 20 East Russell, 31s. 9d. 50 Frontino, 17s. 9d.  
6 Great Laxey, 17 1/2. 30 Gt. So. Chiverton, 11s. 9d. 10 Gt. No. Downs, 44 8s. 9d.  
10 Gt. Retallack, 29 1/2. 4 Gt. Wh. Fortune, 23 1/2. 10 Gt. So. Chiverton, 11s. 9d.  
20 North Downs, 17s. 6d. 25 No. Treskerby, 30s. 6d. 4 Providence, 42 1/2.  
20 Okef Tor, 18s. 9d. 25 Prince of Wales, 54s. 50 South Grenville, 3s. 3d.  
50 Redmoor, 2s. 6d. 30 Rosa Grande, 10s. 6d. 4 W. Chiverton, 46 1/2.  
5 Stray Park, 23 1/2. 5 Tincroft, 41 1/2. 50 W. P. of Wales, 10s. 6d.  
5 West Caradon, 45 1/2. 50 W. Drake Walls, 12s. 6d. 1 Wheal Jane, 43 1/2.  
20 Wheal Agar, 32s. 6d. 20 Wh. Grenville, 29s. 3d. 3 Herodfoot, 43 1/2.  
1 Wheal Seton, 48 1/2. 3 Wh. Mary Ann, 48 1/2. 1 Wheal Vor, 48 1/2.  
South Devon Slab and Slate, fully paid, at 10s. 6d.

**MR. GEORGE BUDGE, STOCK AND SHAREDEALER,**  
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 19 years), has FOR SALE at net prices:—100 West St. Ives; 25 East Rosewarne, 7s.; 20 Gawton, 43 1/2; 100 Great South Chiverton; 50 Okef Tor; 60 Crebore, 4s. 9d.; 45 Wheal Grenville; 20 Wheal Uny, 32s. 3d.; 50 Chontales Royalty; 200 Anglo-Brazilian; 50 Don Pedro; 100 West Tremayne, 7s.; 35 New Lovell, 10s. 6d.; 10 Colquhoun and Callington; 20 Great North Downs; 5 Rose and Chiverton; 10 Devon Great Consols; 100 Redmoor; 70 Lovell Consols, 8s. 9d.; 50 New Crow; 1000 Okef Tor; 25 Great North Laxey, 16s.; 100 Frontino and Bolivia, 17s. 9d.; 1000 Okef Tor; 25 Great North Laxey, 16s.; 100 Frontino and Bolivia, 17s. 9d.; 30 Bryn Gwilog; 50 West Drake Walls, 12s.; 1 Margery; 5 Great Wheal Fortune, 42 1/2; 5 Wheal Buller, 41 1/2; 100 South Grenville, 4s. 9d.

**CORNISH AND DEVON MINES.—**  
ANNUAL REVIEW FOR 1867.

PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST," of yesterday, January 3, 1868, No. 460, price 6d. each copy, forwarded on application, contains the commencement of his ANNUAL REVIEW of Cornish and Devon Mines, with important remarks on the PAST, PRESENT, and FUTURE of nearly all the leading Dividend and Progressive Tin, Copper, and Lead Mines, pointing out those mines most desirable to speculate or invest in at the present low price of shares.

**CORNWALL AND DEVON MINES.—**  
FOREIGN GOLD MINES, &c.

PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST," SYNOPSIS OF CORNISH AND DEVON MINES," of Friday, Jan. 3, No. 460, Vol. IX., price 6d. each copy, forwarded on application, contains information on the following mines:—  
Devon Great Consols. North Levant. Prince of Wales.  
Wheal Seton. Spearn Moor. New Wheal Seton.  
Great Wheal Vor. Trellyn Consols. East Wheal Lovell.  
Wheal Trelawny. Providence. West Great Work.  
Wheal Margery. West Godolphin. Frontino and Bolivia.  
PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London.

**THE LONDON DAILY RECORD—STOCK AND SHARE LIST—STOCK EXCHANGE SECURITIES.** Published every evening at 5 o'clock. It contains the latest prices of railways, banks, mines, foreign stocks and bonds, financial, insurance, and miscellaneous shares, remarks on the daily rise and fall in prices, with advice as to purchase and sales. Annual subscription, £1 1s.; by post, £2 5s.; monthly subscription—by post, 4s.; single copy, 1d.; by post, 2d.  
PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London.

**INVESTMENT OR SPECULATION.—A SELECTED LIST OF RAILWAYS, BANKS, MINES, COLONIAL SECURITIES, FOREIGN GOVERNMENT BONDS, &c.** forwarded to bona fide investors on application, in addition to the high rate of interest many of the above are paying, there is now every probability of a great rise in market value.

PETER WATSON, STOCK AND SHAREDEALER,  
79, OLD BROAD STREET, LONDON  
(three doors only from Hercules-passage, entrance to the Stock Exchange).  
Twenty-three years' experience.  
(Two in Cornwall and Twenty-one in London.)  
Bankers: The Alliance Bank, and the Union Bank of London.  
References given and required (when necessary) in all the principal towns of the United Kingdom.

**MR. EDWARD COOKE, STOCK AND SHAREDEALER,**  
16, OLD BROAD STREET, LONDON, E.C.

Orders for all kinds of Stock Exchange securities, either by letter or telegraph, promptly attended to.  
EDWARD COOKE considers the present to be a most favourable opportunity for purchasing into good mines. There are several now presenting excellent prospects for a great rise in market value in the early part of the ensuing year, particulars respecting which will be readily furnished on application.  
N.B.—A Daily Price List on application.  
Satisfactory references given in any town in the United Kingdom.  
Bankers: Alliance Bank.

**MR. W. H. CUELLO,**  
(late of the firm of WATSON and CUELLO).  
STOCK AND SHAREDEALER  
1, FINCH LANE, CORNHILL.  
References exchanged.  
All transactions can be for cash or account.  
Bankers: Bank of England.

**MR. T. ROSEWARNE, 81, OLD BROAD STREET,**  
LONDON, has BUSINESS in the following shares for cash or time on:—  
Bedford Consols. East Carn Brea. Okef Tor.  
Bedford United. Frontino. Prince of Wales.  
Clifford. Gawton. South Condurrow.  
Chiverton Moor. Great South Tolgus. South Grenville.  
Chontales. Great North Downs. Wheal Seton.  
Devon Consols. Great South Chiverton. West Seton.  
Don Pedro. Great Retallack. West Caradon.  
East Caradon. Herodfoot. West Chiverton.  
East Lovell. Marke Valley. Wheal Agar.  
East Russell. North Crofty. Wheal Grenville.  
Rosa Grande. North Treskerby. East Grenville.  
T. ROSEWARNE has SPECIAL BUSINESS in East Carn Brea, Okef Tor, Bedford Consols, Bedford United, and Prince of Wales.  
T. ROSEWARNE can recommend three mines which are safe to have a great rise within the next three months.  
There are now several mines at low prices likely to have a rise, and good for investment.  
PRICE OF WALES.—From my report this week, the 55 east is very much improved; now worth £90 per fm., and likely to further improve. This is just under where the lode in the 45 was valued at £100 per fm. There is more water coming from the north cross-cut, which shows the lode cannot be far off.  
Money advanced on good mining shares. Office hours from 10 to 4.  
Bankers: Bank of England.

**MR. R. EMERSON, 28, GREAT WINCHESTER STREET,**  
LONDON, E.C., has the following shares FOR SALE:—10 East Caradon; 5 Westminster; 50 West St. Ives; 10 Great South Chiverton; 5 Rose and Chiverton United; 5 East Carn Brea; 20 Clifford; 50 Budnick Consols; 5 Great Laxey; 50 Redmoor; 50 Crebore; 20 Colquhoun and Callington; 25 Okef Tor; 100 Rosa Grande; 30 West Wh. Kitty; 50 Dale; 50 Frontino; 25 East Rosewarne.  
The position and prospects of Budnick Consols are such as will justify the commencement of dividends early in the coming year; therefore, I urge my friends and clients to purchase shares at once, being fully satisfied that, at the present low price, they will realise 100 per cent. on the outlay. I can procure a limited number, for which an early application is necessary in order to secure them, the demand being quite equal to the supply.  
Advice given on the sale and purchase of shares.

**MR. E. J. BARTLETT, STOCK AND SHAREDEALER,**  
30, GREAT ST. HELEN'S, E.C.

**MR. G. D. SANDY, STOCK AND SHAREDEALER,**  
No. 48, THREADNEEDLE STREET, LONDON, E.C., TRANSACTS BUSINESS in EVERY DESCRIPTION of STOCK EXCHANGE SECURITIES, MINING and FINANCIAL ENTERPRISES, at close market prices.  
Money advanced to any amount on legitimate stocks and shares.  
References exchanged.

**MR. EMANUEL BEAZLEY** begs to notify that he will CONTINUE the BUSINESS of STOCK AND SHAREDEALER, as lately carried on under the name of Messrs. J. D. GERN and CO.  
A daily list of Closing Prices will be forwarded on application.  
Mr. BEAZLEY recommends the immediate purchase of Clifford, Prince of Wales, Lovell Consols, and Redmoor. Information respecting these and several other mines may be had on application.  
Member of the Mining Exchange.

**BARTLETT AND CHAPMAN, STOCK AND SHAREDEALERS, 2, BUCKLESBURY, LONDON, E.C.**  
LOVELL CONSOLS.—We again advise all our friends to secure a substantial interest in this mine, as the prospects are favourable for making profits at an early date. The lode in the shaft is rapidly improving—now worth 47 per fathom. Every information forwarded on application.  
Bankers: London and Westminster Bank.

**MR. JOHN R. PIKE, MINING SHAREDEALER,**  
CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C.

**MESSERS. POWELL AND MOSS, SHAREDEALERS,**  
78, OLD BROAD STREET, LONDON, E.C., and Members of the Mining Exchange.  
Bankers: City Bank, Finch Lane.

**MR. JAMES HME, 74, OLD BROAD STREET,**  
TRANSACTS BUSINESS as BUYER and SELLER, at a margin of 1 1/2 per cent.  
WHEAL UNY.—A BUYER of these shares, full market prices.  
PRINCE OF WALES.—A BUYER or SELLER at close prices, and also of Don Pedro, Chontales, North Treskerby, East Caradon, North Crofty, Chiverton Moor, &c.  
Bankers: The London and Stock Bank.

**MR. CHARLES THOMAS,**  
MINING AGENT, GENERAL SHAREDEALER, AND AUCTIONEER,  
3, GREAT ST. HELEN'S, LONDON, E.C.

Now ready, price One Shilling; post-free, fourteen stamps.

**MINING FIELDS OF THE WEST:**  
A PRACTICAL EXPOSITION OF THE PRINCIPAL MINES AND MINING DISTRICTS OF CORNWALL AND DEVON.  
Published by CHARLES THOMAS.  
At No. 3, Great St. Helen's, London, E.C.

**MESSERS. LANE AND GIBBS, 2, ROYAL EXCHANGE,**  
LONDON, E.C. (Members of the Mining Exchange), STOCK AND SHAREDEALERS, transact business in all kinds of securities at closest net prices for cash or account.  
SPECIAL BUSINESS in Frontino and Bolivia, Chontales (ordinary or royalty), Don Pedro del Rey, St. John del Rey, Great Laxey, and West Chiverton Mines. Holders wishing to exchange shares in mines for railway stock, or into miscellaneous companies can do so by applying as above.  
Daily price list on application.  
Bankers: London and County Bank.

Established Sixteen Years.  
**GRANVILLE SHARP AND CO.,**  
STOCK AND SHAREDEALERS,  
32, POULTRY, LONDON, E.C.

Have SPECIAL BUSINESS in the FOLLOWING SHARES, at close prices:—  
West Chiverton. Wheal Seton. Chontales.  
Chiverton Moor. West Wheal Seton. Frontino and Bolivia.  
East Chiverton. Great Laxey. Don Pedro No. del Rey.  
Chiverton. Great Wheal Vor. St. John del Rey.  
North Treskerby. Prince of Wales. Wheal Bassett.  
SHARES FOR SALE:—20 Kitty (St. Agnes), £2 2s. 6d., and 100 South Grenville, 3s. per share.  
SHARES WANTED:—50 North Jane.

**SHARP'S GUIDE TO SHAREHOLDERS.**  
Dividends 5 to 20 per cent. per annum on present outlay.  
Reliable information and safe investments, paying good dividends, will be found in SHARP'S INVESTMENT CIRCULAR.  
GRANVILLE SHARP AND CO., STOCK AND SHAREDEALERS,  
32, POULTRY, LONDON, E.C.  
Circular, 6d. per copy; annual subscription, 5s. [Established 1852.]

**SHARP'S GUIDE TO CAPITALISTS.**  
Dividends 5 to 20 per cent. per annum on present outlay.  
Reliable information and safe investments, paying good dividends, will be found in SHARP'S INVESTMENT CIRCULAR.  
GRANVILLE SHARP AND CO., STOCK AND SHAREDEALERS,  
32, POULTRY, LONDON, E.C.  
Circular, 6d. per copy; annual subscription, 5s. [Established 1852.]

**SHARP'S GUIDE TO TRUSTEES.**  
Dividends 5 to 20 per cent. per annum on present outlay.  
Reliable information and safe investments, paying good dividends, will be found in SHARP'S INVESTMENT CIRCULAR.  
GRANVILLE SHARP AND CO., STOCK AND SHAREDEALERS,  
32, POULTRY, LONDON, E.C.  
Circular, 6d. per copy; annual subscription, 5s. [Established 1852.]

**SHARP'S GUIDE TO INVESTORS.**  
Dividends 5 to 20 per cent. per annum on present outlay.  
Reliable information and safe investments, paying good dividends, will be found in SHARP'S INVESTMENT CIRCULAR.  
GRANVILLE SHARP AND CO., STOCK AND SHAREDEALERS,  
32, POULTRY, LONDON, E.C.  
Circular, 6d. per copy; annual subscription, 5s. [Established 1852.]

**MATTHEW GREENE, STOCK AND SHAREDEALER,**  
ST. MICHAEL'S HOUSE, CORNHILL, LONDON, E.C.  
Mr. MATTHEW GREENE recommends for immediate purchase Tamar Valley Silver-Lead shares—certain for a rise.  
Mr. MATTHEW GREENE confidently asserts that no such chance is at present to be had as the shares in this mine.

**MR. HENRY MANSELL,**  
STOCK AND SHAREDEALER,  
No. 44, THREADNEEDLE STREET, LONDON, E.C.  
Member of the Mining Exchange.  
Bankers: London Joint-Stock Bank.

**JOHN RISLEY, STOCK AND SHAREBROKER**  
(SWORN BROKER),  
48, THREADNEEDLE STREET, LONDON, E.C.  
Business transacted on commission only.  
Bankers: London and Westminster, Lothbury.

**MR. JAMES STOCKER,**  
PALMERSTON BUILDINGS, OLD BROAD STREET, AND MINING EXCHANGE, LONDON, E.C., STOCK AND SHAREDEALER in all kinds of Stock Exchange and Mining Securities.  
Established Twenty Years.  
Money promptly advanced on shares.  
Bankers: London and Westminster, Lothbury.

**MR. J. N. MAUGHAN, STOCK AND SHAREBROKER**  
(Member of the Stock Exchange),  
No. 2, COLLINGWOOD STREET, NEWCASTLE-ON-TYNE.  
Transacts business in Railways, Funds, and every description of Mines.  
Bankers: Messrs. Lambton and Co.

**MESSERS. J. TAYLOR AND CO., FINANCIAL, MINING, AND GENERAL AGENTS, 17, CROSS STREET, MANCHESTER,**  
have the following SHARES FOR SALE:—  
50 New Birch Tor & Vit. 10 West St. Ives. 20 North Downs.  
30 Great North Laxey. 3 West Chiverton.

**MESSERS. WILSON, WARD, AND CO.,**  
SHAREDEALERS,  
16, UNION COURT, OLD BROAD STREET, LONDON, E.C.  
BUYERS of any number of Frontino and Bolivia, and New Great Consols, shares at full market price. A special report upon New Great Consols Mine can be had on application, post free.

**JAMES SCOTT AND CO., STOCK AND SHAREDEALERS,**  
1, PINNER'S COURT, OLD BROAD STREET, LONDON, E.C.  
Mine Shares and all Stock Exchange securities dealt in at close market prices for cash or the bi-monthly settlement. References given.  
JAMES SCOTT and Co. are the proprietors of the "British and Foreign Mining Circular," published immediately after the Stock Exchange fortnightly settlements.

**CHONTALES GOLD COMPANY.—FULL PARTICULARS** of the DIFFERENT CLASSES of SHARES can be obtained on application to Mr. J. H. MURCHISON, No. 8, Austinfriars, E.C.

**MESSERS. KEANE AND CO.,**  
MINING AGENTS, AND SHAREDEALERS,  
90, CANNON STREET, LONDON, E.C., and  
BRIDGEWATER CHAMBERS, BROWN STREET, MANCHESTER.

GOOD INCOME ON SMALL OUTLAY IN FIRST-CLASS MINES.  
**MR. CHARLES WATSON, 2, CROWN COURT,**  
THREADNEEDLE STREET, recommends with confidence HALF-A-DOZEN VALUABLE MINES, paying from 10 to 20 per cent.  
Mr. CHARLES WATSON has the FOLLOWING FIRST-CLASS SECURITIES for INVESTMENT:—Indian 5 per cent. Railways, guaranteed by the Council of India; Colonial Bonds; United States 5-20 Bonds. Brazilian and Egyptian Bonds pay from 5 to 8 per cent. as regularly as Consols. Turkish 1865 Loan pays 15 per cent. without liability.  
A List of Dividend-paying Mines and of carefully selected Investments sent free by Mr. CHARLES WATSON, Stock, Share, Consol, and Mining Dealer, 2, Crown-court, Threadneedle-street, E.C.

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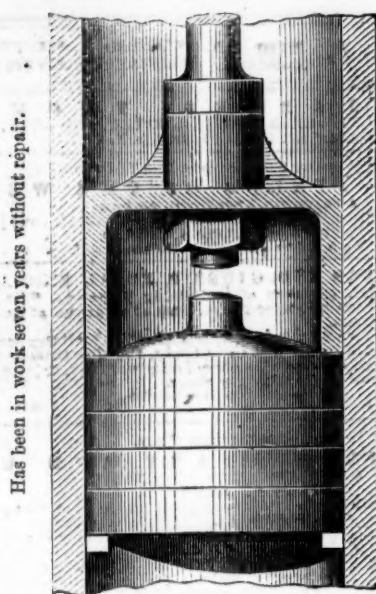
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THREADNEEDLE STREET, recommends with confidence HALF-A-DOZEN VALUABLE MINES, paying from 10 to 20 per cent.  
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A List of Dividend-paying Mines and of carefully selected Investments sent free by Mr. CHARLES WATSON, Stock, Share, Consol, and Mining Dealer, 2, Crown-court, Threadneedle-street, E.C.

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# MATHER AND PLATT

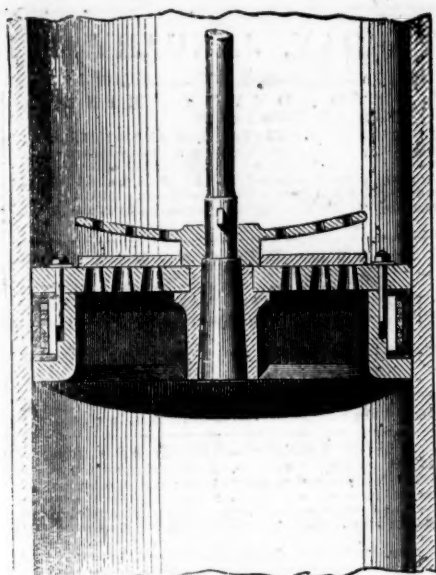
## MILLWRIGHTS, ENGINEERS, AND MACHINE MAKERS, SALFORD IRON WORKS, MANCHESTER.



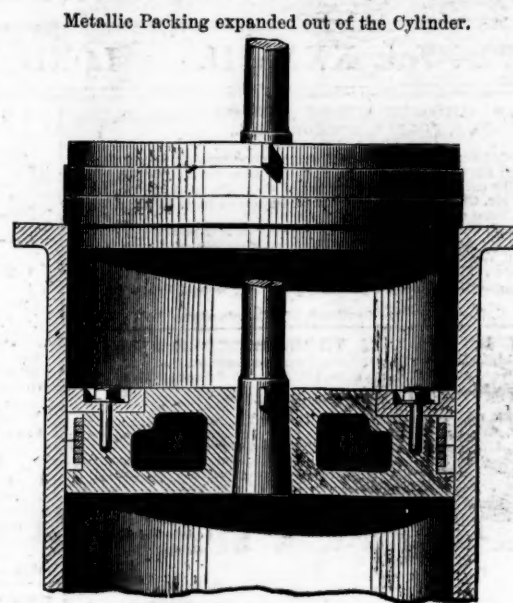
Has been in work seven years without repair.

Lift 348 feet.

COLD WATER PUMP FOR DEEP LIFTS.



AIR-PUMP BUCKET.



Metallic Packing expanded out of the Cylinder.

PISTON IN THE CYLINDER.

MATHER and PLATT beg to call the attention of ENGINEERS and USERS of STEAM POWER to their PATENT PISTONS, AIR PUMP BUCKETS, and COLD WATER PUMPS. The estimation in which these Pistons, &c., are held is shown by the fact that 4760 have been made, as well as by the following Testimonials from gentlemen whose large experience and extensive practice enable them to judge of their qualifications:—

"GENTLEMEN,—During the last 19 years, commencing in 1848, I have put in upwards of 33 of your patent metallic pistons and pump-buckets, into 49 engines and 20 pumps, under my care at the Bridgewater Trustees' Collieries. I can bear testimony to the very efficient and economical working of the same, and feel confident that with ordinary care they will give general satisfaction, wherever brought into use, possessing, as they do, many practical advantages over other pistons and buckets, being simple, durable, and effective. I have one piston (No. 671) which has been working daily for more than 15 years, one (No. 1586) 10 years, and one (No. 2246) over 7 years, without cost of repairs or trouble of any kind, except occasional cleaning. The smooth and highly polished condition of the cylinders during this length of time convinces me that the action of the metallic packing is so equable and perfect as to render the piston steam-tight and self-adjusting, without producing any appreciable friction. I have had two of your patent metallic pump-buckets working daily for over seven years, one lifting 300 feet, and one 348 feet, and both are yet performing good duty. I am now putting in one of 10 inches diameter patent buckets, to work 10 strokes, of 8 feet 4 inches per minute, under a pressure of 12 atmospheres, and feel confident of success, thus showing the superiority over other buckets, more especially where long lifts and simplicity are required. I herewith hand you an order for a 53-inch diameter piston and rod complete, also air-pump bucket, 26½ inches diameter, and rod complete. Hoping you will forward the same to these collieries as early as practicable,

"Messrs. Mather and Platt, Salford Ironworks, Manchester."

"Bridgewater Collieries, Walkden, Bolton-le-Moors, October 26, 1867.

"I remain, Gentlemen, yours very respectfully,

"JESSE TIMMINS, Colliery Engineer.

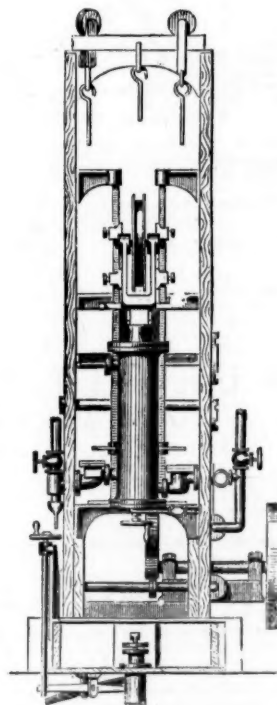
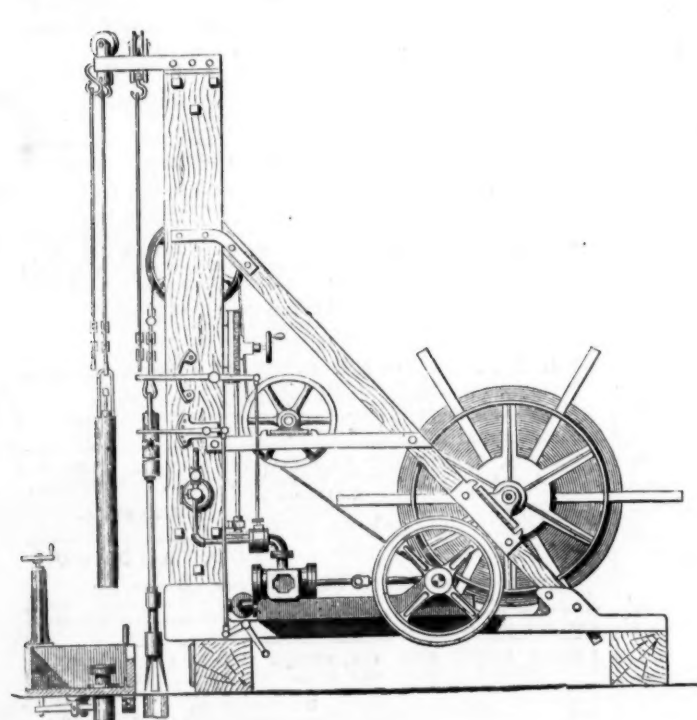
"Frampton Cottrell, near Bristol, October 31, 1867.

"GENTLEMEN,—I have ordered direct, or included in specifications of engines which I have prepared, upwards of 100 of your pistons and buckets, between the years 1850 and 1867, and I feel convinced they are the best pistons that have come under my notice, and if any proof was wanting as to my opinion of them, it may be found in the fact of my ordering the last 70 inch piston from you for our present works.

"Messrs. Mather and Platt, Salford Ironworks, Manchester."

"I remain, Gentlemen, yours truly,

"WILLIAM BAILEY.



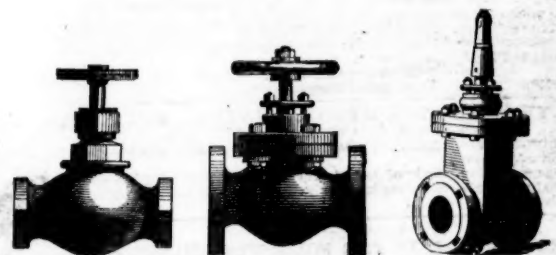
### IMPROVED PATENT EARTH BORING MACHINES.

A considerable number of these Machines has been in most successful operation for some years in exploring for minerals and coal and the boring of Artesian wells, for supplying many towns, manufactories, &c., with water. Upwards of 50 bore-holes, from 6 in. to 24 in. diameter, representing in all 20,000 ft. of boring, have been sunk in various parts of the world, through rocks of every form and degree of hardness, from the New Red Sandstone to the Igneous formations, as well as Chalk and the London Clay.

The Machine is worked entirely by steam-power, requiring a small boiler, from 6 to 12 horse power, according to diameter of the bore-holes. The framing is made of wood, to render the Machine of easy transport.

The rate of boring is not appreciably decreased as the depth increases, as a flat rope is used in place of rods in the old system.

M. and P. beg to call attention to their Revised List of Prices of VALVES, TAPS, &c. They also request the notice of Water Companies and Hydraulic Engineers to their IMPROVED SLUICE VALVES for Water. The slides have Gun-metal Facings, are of Wedge form, and when screwed down are tight on both sides:—



GUN METAL TAPS.			CAST IRON STEAM VALVES, WITH GUN METAL VALVES AND SEATINGS.			CAST IRON SLUICE VALVES, WITH GUN METAL FACINGS.		
Bore. Inches.	Price. £ s. d.		Bore. Inches.	Price. £ s. d.		Bore. Inches.	Price. £ s. d.	
3/4	0 4 0		2	1 2 6		2	1 10 0	
1	0 4 6		3	1 17 6		3	2 5 0	
1 1/4	0 6 0		4	2 15 0		4	3 0 0	
1 1/2	0 8 6		5	3 15 0		5	3 16 0	
1 3/4	0 11 0		6	4 17 0		6	4 14 0	
2	0 14 0		7	6 0 0		7	5 14 0	
2 1/4	0 18 0		8	7 5 0		8	6 16 0	
2 1/2	1 2 6		9	8 15 0		9	8 0 0	
			10	10 10 0		10	9 6 0	
			11	12 5 0		11	10 14 0	
			12	14 0 0		12	12 4 0	

The attention of those interested in Metallurgy and Mining is called also to an

### IMPROVED BUDDLE, OR ORE WASHING MACHINE

Which they believe will be found of great benefit

TERMS AND PARTICULARS CAN BE HAD ON APPLICATION.



PARIS EXHIBITION, 1867.—AWARDED THE ONLY FIRST-CLASS MEDAL FOR CRUCIBLES.

SILVER MEDALS, CLASSES 40-51.

**THE PATENT PLUMBAGO CRUCIBLE COMPANY,**

SOLE MANUFACTURERS UNDER MORGAN'S PATENT,

BATTERSEA WORKS, LONDON, S.W.

*These Crucibles (MORGAN'S PATENT) were the only ones to which Prize Medals were awarded in London, 1862; Dublin 1865; New Zealand, 1865; and Oporto, 1865.**"It follows, with the persistence of a law, that originators should be beset by imitators, just as in the natural world the finest organic forms are most liable to parasitical growth."—Miss METEYARD'S Life of Josiah Wedgwood, the Potter.*

MORGAN'S PATENT CRUCIBLES can be made any shape or size required, and are stamped as below:—

Having secured new Patents for our  
Manufacture, and to prevent fraudulentImitations, we call particular attention  
to our Trade Mark, as here shown.

In all instances please specify "MORGAN'S PATENT," and address to—

BATTERSEA WORKS, LONDON, S.W.

**ANTI-ATTRITION POWDER,**

MANUFACTURED SOLELY BY

THE PATENT PLUMBAGO CRUCIBLE COMPANY,

BATTERSEA WORKS, LONDON, S.W.

PARIS EXHIBITION—Exhibited in Group V., Class 40; Silver Medals awarded, Classes 40 and 47.

This POWDER mixed with grease makes a cheap and good lubricant—one part grease (tallow) to two parts of the Anti-Attrition Powder,—and is suitable for all kinds of bearings.

The following is extracted from the "Practical Mechanics' Journal":—

*"The Patent Plumbago Crucible Company, of Battersea Works, have recently brought out a dry lubricant in the form of a peculiarly prepared impalpable powder, as a substitute for oil or other fluid or semi-fluid lubricants. It is perfectly free from grit, and imparts a fine polish to the rubbing surfaces. The great objections to oil and grease are that they readily catch and retain particles of dust and gritty matter, which, by becoming embedded in the metal, produce abrasion and heating of the parts. The Anti-Attrition Powder is perfectly free from these defects; it is cleanly, and adheres well to the surface of the metal, entirely filling up the pores. It is equally applicable to slow or quick running shafts, and forms an excellent lubricant for the interiors of the cylinders of blowing-engines. It is being used by several well-known firms, amongst which we may mention the Ebbw Vale Company, and Platt Brothers and Co., and has given great satisfaction. We should think Pianoforte Makers would find this an excellent substitute for the black-lead at present used in smoothing the working parts of a pianoforte action, the Anti-Attrition Powder being apparently well adapted for woodwork. It also forms an excellent medium for dusting the surfaces of moulds and castings."*

PRICE ..... 30s. PER CWT.

SAMPLES ON APPLICATION TO

THE PATENT PLUMBAGO CRUCIBLE COMPANY,

Sole Manufacturers under MORGAN'S PATENT,

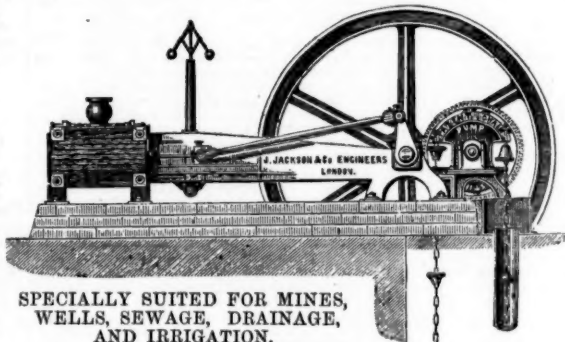
BATTERSEA WORKS, LONDON, S.W.

**J. JACKSON AND CO., ENGINEERS, LONDON, E.C.****BASTIER'S PATENT CHAIN PUMP.**

This is the most efficient pump ever introduced to public notice for deep vertical lifts. It is cheap in its first cost, requires no cleaning and little attention, and the cost of maintaining it with duplicate wearing parts is very small.

The water is lifted through vertical tubes. At every interval of 40 yards a contracted part, or working barrel, is inserted, smaller in diameter than the main pipe, one of which is always placed at the lower end. An endless chain passes over the driving wheel at the top, going down free, and coming up through the tube, into which it enters by a bell-shaped mouth-piece. On this chain are fixed india-rubber discs, smaller in diameter than the main pipe, but fitting tight in the working barrels, so that all the water that enters is forced up and carried through the main pipe. The discs being free all round from the pipe for nine-tenths of the whole distance, reduces the friction to a minimum.

Eighty-seven per cent. of the whole area of the tube is lifted in water. A 3½ in. pump has lifted 120 gallons per minute, from a depth of 270 ft., with 10·75 indicated horse power; other sizes in proportion. These pumps are now at work throughout England, sizes varying from 2½ to 15 in. diameter, and up to 300 ft. deep.

SPECIALLY SUITED FOR MINES,  
WELLS, SEWAGE, DRAINAGE,  
AND IRRIGATION.PUMPS WITH STEAM ENGINES, AND CATTLE,  
WIND, OR HAND-POWER GEAR,

Manufactured by the proprietors of the patent,

J. JACKSON AND CO.,

17, GRACECHURCH STREET, LONDON, E.C.

PRICE LISTS ON APPLICATION.

FOR THE COUNTIES OF NORTHUMBERLAND, DURHAM, YORK,  
DERBY, AND NORTH STAFFORD, APPLY TO

MR. THOMAS GREENER,

MINING OFFICE, NORTHGATE, DARLINGTON:

AGENTS FOR SCOTLAND,

MESSRS. P. AND W. MACLELLAN,  
127 and 129, TROGATE, GLASGOW.

A SMALL PUMP MAY BE SEEN AT WORK ON APPLICATION TO MESSRS. J. H. GREENER AND CO., 5, JOHN STREET, ADELPHI, W.C., WHO WILL ALSO SUPPLY ANY INFORMATION REQUIRED.

**PATENT FLEXIBLE TUBING,**  
AND BRATTICE CLOTH FOR MINES

MANUFACTURED BY

ELLIS LEVER,

WEST GORTON WORKS, MANCHESTER.

**THE NEW PATENT INJECTOR.**

FOR FEEDING BOILERS AND RAISING WATER FOR OTHER PURPOSES.

PRICES, DELIVERED IN LONDON.						
Size. No. 4	Ram. in.	Stroke. in.	Approx. horse-power		Approximate gallons thrown per hour.	
			boiler supplied.	At 100 rev.	150 rev.	200 rev. p. min.
4	1½	3	15	115	172	230
5	1½	3	22	180	270	360
6	1½	4	30	240	360	480
7	2½	4	40	345	517	690
8	2½	5½	55	475	712	950
9	2½	6½	75	655	980	1300
10	2½	6½	90	720	1080	1440
11	2½	6½	110	870	1305	1740
12	2½	8	120	1030	1545	2060
14	3	8	230	2450	3675	—
16	3½	8	460	4900	7350	—

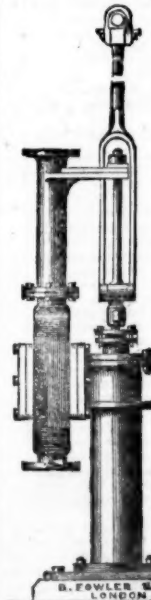
\* The two last are double-acting.

Steam Regulator Valves, and also Check Valves, specially made to suit these Engines, can be supplied.  
Terms: Nett Cash on Delivery.

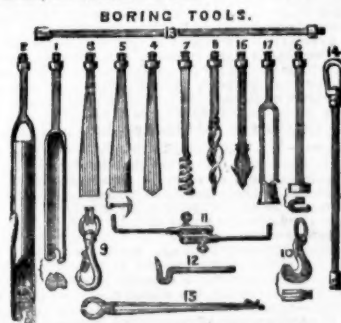
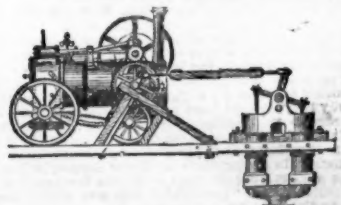
A CIRCULAR, WITH FULL EXPLANATION AND COMPARISONS, WILL BE SENT ON APPLICATION.

BROWN, WILSON, AND CO.,

No. 80, CANNON STREET, E.C.; AND VAUXHALL IRON WORKS, LONDON, S.

S. OWENS AND CO. (LATE CLINTON AND OWENS),  
WHITEFRIARS STREET, FLEET STREET, LONDON, E.C.,  
HYDRAULIC AND GENERAL ENGINEERS,  
MANUFACTURERS OF PUMPS OF EVERY DESCRIPTION FOR HAND,  
HORSE, WATER, OR STEAM POWER.

Improved Double-action Pumps.

Boring Tools of every description, for Testing  
Ground and for Artesian Wells.Portable Engines with Double Barrel, or other  
Pumps, on Hire or Purchase.

Full information, Drawings, Price Lists, &amp;c., relating to the above, and to Hydraulic Machinery of all descriptions—Crabs, Pulleys, Blocks, and Hoisting Tackle of superior manufacture—may be had on application.



## Meetings of Public Companies.

## LLANBERIS SLATE COMPANY.

The annual general meeting of shareholders was held at the company's offices, Sise-lane, Bucklersbury, on Tuesday, Mr. HENRY HAYMEN in the chair.

Mr. W. FLETCHER, jun. (the secretary) having read the notice convening the meeting, the directors' report was read, as follows:—

The directors consider it expedient to make an entire change in the system hitherto pursued of working the quarry, and desire, therefore, to make its proprietors fully acquainted with the reasons for taking this important step. Feeling very dissatisfied with the slow progress made, and the failure in the estimates and predictions of the late resident engineer, Mr. Emerson, the directors instituted a searching investigation into the cause, and arrived at the conclusion that the capital of the company would not suffice to complete the works necessary before the open workings could yield a profit. The deadwork not only proved to be very much heavier than anticipated, but when the floors were cleared, it was found that the slate rock reached had been so much affected by weather action, that the slates made would not pay their cost. This latter fact would have been discovered much earlier, but for the circumstance that the greater part of the cost of winning the slate rock had been improperly placed in the deadwork account, thus conveying the impression to the directors that the slates produced were made at a profit. Several months back the attention of the board had been directed to the tunnelling machine patented by Messrs. Cooke and Hunter, and the directors, therefore, deputed their colleague, Mr. Elliott, who had long advocated its employment, to watch its action. The tunnelling machine having been practically tested at the Maen Offren Quarry, it was proved capable of forming a tunnel 7 ft. in diameter at the rate forward of 9 feet per diem, and of producing in its progress a large proportion of rock available for slate making. According to the calculations made by the patentees, the process of making a tunnel on their system, through good slate rock, leaves a large profit on the operation, in addition to the prospective returns to be obtained from the quarry thus unroofed. To form such a tunnel by hand labour would cost 41. per yard forward, occupy sixfold time, and waste the whole of the slate excavated. The time and cost that must be expended in any attempt to work the quarry by hand chambering seemed thus to place that method beyond the means of the company. Mr. Griffith Ellis having again inspected the quarry, and stated that the appearance of the rock was very promising, and a trial tunnel on No. 9 floor into some depth having yielded excellent slate rock, the directors felt assured that the results would be obtained if by any means they could win the rock, of which there appears to be an inexhaustible quantity. At the depth it was proved to be free from those injurious influences which rendered the outcrop unprofitable. Negotiations were, therefore, opened with Messrs. Cooke and Hunter, who at first asked a considerable sum for the license of each machine, and a heavy royalty on the slates produced. On inspecting the quarry, and satisfying themselves of the great quantity and excellent quality of the rock it could produce, the gentlemen offered to waive all claim for license and royalty in consideration of 1800 shares being allotted to them, 41. 10s. per share being considered as paid on each share, leaving Messrs. Cooke and Hunter with a liability of 1000l., which they agreed to pay as follows:—1000l. down, and 900l. towards redeeming the debentures in June, 1869. As it was most important to lose no time, this proposal was accepted by the directors, and the first machine ordered, which is now at the quarry, and has commenced work. Admitting that the slate rock is in such a position as to be worked by the aid of the tunnelling machine, the directors entertain little doubt that by the aid of the tunnelling machines the quarry will soon be converted into a very valuable property. Heavy and unsatisfactory as the outlay hitherto has proved, a good deal of the work done can hereafter be turned to good account, and the interest on the whole cost, inclusive of the purchase of the freehold, would not exceed the royalty that would be required under a leasehold on the quantity of slates likely to be produced. Under the circumstances of the past year, the directors, whose own stake in the company is so large, have felt deeply responsible to the shareholders, whose interests they claim to have studied most carefully, and trust to have served effectively. The proprietors will remember that in April last, in order that the working of the quarry should not be stopped for want of funds, they obtained the consent of the shareholders to issue debentures. These debentures were offered to the shareholders, but only 950l. were subscribed for, and the directors, to help the company, then took up 4000l. There are still 2650l. of these debentures unissued, and the directors trust the shareholders will come forward and aid them in carrying on the works by taking up their proportion. The directors are happy to be able to inform the shareholders that one of the patentees of the tunnelling machine, William Fothergill Cooke, Esq., whose name is so well-known to the world as the inventor of the electric telegraph, has consented to join the board.

The CHAIRMAN, in moving the adoption of the report, said that it fully explained all that had been done for the year. At the last meeting Mr. Emerson, their then manager, promised certain things which had not been carried out, since which the agreement with that gentleman had been cancelled. The board had also had considerable financial difficulties to contend with, two shareholders only coming forward to assist in taking up the debentures; but the directors, not having lost faith in the property, had subscribed 4000l. Their colleague, Mr. Elliott, had undertaken to visit the quarry monthly and superintend the working, and by the aid of Messrs. Cooke and Hunter's tunnelling machine, which saved the slate through which it cut, and which under the present mode of working was wasted in blasting, the slate rock would become of commercial value to the company. The directors hoped that at the next meeting they would have to report a very different state of affairs.

Mr. J. ELLIOTT fully bore out all that had been stated respecting the manner in which the quarry had been worked by their late manager, Mr. Emerson. At the same time, he was much pleased with the working of Messrs. Cooke and Hunter's machine, and which he (Mr. Elliott) fully believed would enable them to make a good profit directly they got into the productive slate rock.

Mr. W. F. COOKE, having explained the working of the tunnelling machine, said that he had great faith in the property, and to test its value had not hesitated to embark his money in it.

The CHAIRMAN, in reply to a shareholder, entered fully into the matter between Mr. Emerson and the board. The report and accounts were received and adopted. Messrs. Quilter, Ball, and Co. were re-elected auditors, and a vote of thanks to the Chairman terminated the proceedings.

## BRAZILIAN LAND AND MINING COMPANY.

A general meeting of shareholders was held at the offices, Poultry, on Tuesday, Mr. SAMUEL GURNEY SHEPPARD in the chair.

Mr. CHARLES WILLIAMS (the secretary) read the notice convening the meeting.

The report of the directors regretted that up to the present time Mr. J. P. Brown, the receiver and manager of the National Brazilian Mining Association (appointed by an order of the Court of Chancery), had not taken any opportunity of realising any of the property of the association for the benefit of the mortgagees (the Brazilian Land and Mining Company); also that negotiations had been pending for a very considerable period for the sale of the Rotundo estate, and in consequence of these not being completed, the shareholders have not been called together, as the directors felt it unnecessary to do so until they could lay before them something of a more definite character. In the last report it was stated that hopes were entertained that the directors of this company would be enabled to make arrangements for the purchase of the outstanding debts as have been already proved against the National Brazilian Mining Association; but in the absence of remittances from Mr. Brown, either for this or any other purpose, it has not been in their power to effect this very desirable object. The receiver and manager has for the last two years and a half been employing all his available resources in clearing out and sinking Irving's shaft, of the Serra Velha Mine, at Coacae, so as to reach the workings destroyed by the great crash, which was entailed upon the property, and the prospects held out by Capt. Vivian, if the operations are vigorously carried on, will be found annexed to this report. Mr. Brown, in his recent despatches, has urged upon the directors the necessity of sending over pumping apparatus and mining machinery, which would probably involve an outlay of 10000l.; but without funds this is impracticable. He has also strongly urged upon the directors the importance of appealing to the shareholders of this company, as mortgagees, to aid him with the requisite funds for keeping the mine open, and thus prevent the lease from falling into the hands of the freeholder. According to the estimate it appears that a sum of 5000l. will be required, and a period of about a year must elapse before the mine can be expected to produce an adequate return of gold. The directors are of opinion that should the proposal to raise further capital be approved, it should take the form of preference shares, bearing a fixed interest, and have prepared a resolution accordingly, which will be submitted for consideration at the special general meeting, convened for that purpose. The directors are desirous of the assistance of the shareholders by the nomination of two gentlemen, holding the necessary qualification, being elected members of the board.

The CHAIRMAN said his first duty was to move the adoption of the report. Mr. CLOTHIER thought it was desirable to read the minutes of the last meeting, so that the shareholders might know what took place. The CHAIRMAN said there could be no possible objection to that being done. The directors had been unable to get any money at all from Brazil, so that their position had been one of great anxiety indeed. They had advanced money, and now felt themselves in a very difficult position, for the receiver and manager of the Brazilian Land and Mining Company, Mr. J. P. Brown, had undertaken to clear up the Serra Velha Mine or give it up. Feeling a good deal of anxiety, they determined to call the shareholders together, to ascertain their opinion as to the most advisable course to pursue. If shareholders were desirous of subscribing the necessary additional capital, the directors—who held a considerable interest in the company—believed, were prepared to find their proportion; but at the same time, as he was personally concerned, he certainly did not see much to encourage the adoption of such a course. The expenditure of a certain amount of money for the purposes of prospecting, as sanctioned by the shareholders, had not produced any satisfactory result, but now it was made out, according to the reports, that the gold would soon be reached. He was unable to express any opinion upon the subject; and this was the feeling which had actuated his colleagues upon the board in calling the shareholders together upon the present occasion—they felt they ought not to take upon themselves the responsibility of refusing to find the necessary capital, for if the property subsequently got into the hands of other people, who might develop it upon a more extensive scale, and prove it to be another St. John del Rey, the shareholders would probably turn round, and ask why they had not been consulted upon such an important point. He then proceeded to read extracts from Mr. J. P. Brown (the receiver and manager of the National Brazilian Mining Association) upon the Serra Velha Mine. They were to the effect that the property was situated in the eastern section of the Coacae Estate, in the province of Minas Geraes, in Brazil, and in the very centre of the gold mining district; and that formation was composed of micaceous iron schist, called "jacutinga," and was nearly identical with that of Gonzaga, on the same range of mountains, from which gold to the value of 1,300,000l.

had been extracted. In the same kind of rock, and in the same mountain range, nearly all the rich jacutinga mines in Brazil have been found. The jacutinga contains lines of gold, and these again containing rich shoots, dipping easterly, at an angle of 30°, have occasionally produced many pounds of gold per day. There is upwards of a mile of virgin jacutinga formation unexplored to the east of the shallow adit. A discovery of a shoot of gold in the ground, such as was formerly made in the shallow adit, would be a most gratifying result as the recent discovery at the Don Pedro North del Rey, which is a similar formation, and at once place Coacae in the list of dividend-paying mines. From 1846 to 1851 a shallow adit was driven upon the lode, and a shaft called Irving's shaft, sunk to about 20 fathoms vertical below it. In the latter year a great crush took place, carrying away the pumping-gear, choking up the engine-shaft, and filling the level with fallen rocks and stones. The excavations in depth are supposed to be unimpaired, as the crush took place beyond the inclined plane leading to the bottom of the works, and it is certain that gold was left in two of the stopes in these excavations. When the receiver and manager removed his force to Coacae, about two years and a half ago, he commenced, under Captain Vivian's advice, to clear out the shallow adit, and more recently to sink Irving's shaft, so as to cut the lode in depth: this shaft has been properly timbered and secured to the depth of 78 feet from the horizon of the shallow adit. The bottom of the shaft is now in the lode, from which a considerable sample has been taken, indicating richer deposits, and to carry on the works machinery is required, and an expenditure must be incurred to the amount of about 5000l. He also read Captain Nicholas Vivian's report upon the Serra Velha Mine, and the manner in which he proposed to work it, should the receiver and manager of the National Brazilian Mining Association receive an advance from this company for that purpose. He had been employed in this mine for the last two years and a half, during which time a great deal of deadwork had been done, and no less than 1500 loads of the miners' waste had been hauled to the surface. Irving's shaft has been sunk 78 feet from the horizon of the shallow adit, and now it is with much pleasure he had to report that the bottom of the shaft has cut into the formation, and the same showing a little gold. If the shaft were sunk a little deeper, to intersect the foot-wall, no doubt the stone would be of a better quality, as it has always been the case in Coacae; and at the same time they would be in a position to cut into Hartley's and Hamilton's stopes, from which the 15 heads of stamps could be supplied, and regular gold returns would be forthcoming. In addition to this work, he proposed driving a level west to cut the veins of gold which are known to exist. The Coacae Mine was never in a better position than it is at the present moment, and it would be a great pity that it should be abandoned, and he should recommend the company to try further, as there is sure to be gold. To carry out the works it would require four English miners, one smith, and one carpenter; also some materials taken out from England. The whole cost in putting the mine in good position would be 5000l., and the work could be completed in 12 months.

Mr. CLOTHIER, notwithstanding what might be reported by Mr. Brown and Capt. Vivian, would support no proposition other than that the company should be forthwith wound-up.

The CHAIRMAN, having read the minutes of the last meeting, explained that the directors had been unable to pay the claims therein referred to, for the simple reason, they had had no funds. This company was in the position of mortgagees of the property, and the claims were made against the shareholders, who represented them but Mr. Brown.

Mr. CLOTHIER said there were two or three items in the balance-sheet which seemed to require explanation. He proceeded to point out the items he referred to, which were explained by the secretary.

The CHAIRMAN, in further explanation, said that the item of loans had been paid off, and it did not appear in the balance-sheet. He also explained that a resolution was passed at a special meeting which authorised the directors to buy up certain claims for 1200l., and one of the securities bought up was a lease of a house in Throgmorton-street, which the directors subsequently sold for 3500l., and that was employed for the paying off the 1200l. advanced to buy up the claims of the Commercial Bank, as well as other claims, the balance being paid into the Court of Chancery, where it was at the present time. The difficulty had been to keep the claims clear, and under the necessity of providing for the repayment of the Imperial Government, and therefore, there had been great difficulty in presenting a proper report and balance-sheet of the Brazilian Land and Mining Company. There had been some difficulty in disconnecting the accounts of the two concerns. They were not only mortgagees of the National Brazilian Mining Association, but they were interested as shareholders in the Coacae Company.

After a lengthened discussion, it was suggested that an adjournment be agreed upon, to afford those of the shareholders who desired it an opportunity of examining the accounts at home by Mr. Brown, an abstract of which is to be prepared by the secretary.

The suggestion was adopted, and the meeting was adjourned till Jan. 31, as was also the extraordinary meeting, convened for the purpose of considering the propriety of raising additional capital.

An unanimous vote of thanks was passed to the Chairman, when the meeting separated.

## THE RUSSIAN (VYKSOUNSKY) IRONWORKS COMPANY.

The annual general meeting of shareholders was held at the offices, Pinner's-hall, Old Broad-street, on Tuesday, Mr. W. AUSTIN in the chair.

Mr. COURTENAY CLARKE (the secretary) read the notice convening the meeting. The report of the directors (extracts from which appeared in last week's Journal) states that the company are earning very considerable profits, and would be able to pay an increased dividend to the shareholders, and also to provide for the redemption of the debentures within a limited period; and this, without reckoning on the additional profit likely to be made from the Government rail contract and the Koulabak property. An important contract has been entered into with the Russian Government for the manufacture of 5,000,000 pounds, or about 80,000 tons, of rails, at a price of 1.100 rubles per pound, or about 12s. 2s. per ton, deliverable at Moscow. A careful estimate shows that this price will leave the company a fair rate of profit. The delivery will extend over 10 years, and the Imperial Government will advance sufficient funds to supply the necessary machinery for the manufacture of the rails. While this contract is likely to be extremely valuable to the company, it will be no less so to the Russian Government, for everyone conversant with the subject will know that the rails manufactured of charcoal iron by this company will last twice or three times as long as any sea-borne rails which would come into competition with them. The Imperial Government has also liberally granted, on fair terms, the privilege of cutting wood in the neighbourhood of the works; and this concession has placed the company at ease as to the supply of that necessary article. The increased supply of iron required for the rail contract has induced the directors to accept a lease, for a term of 25 years, of the mineral property of Koulabak and Moorsitz, containing about 3000 dessiatines, or 5100 acres of land, at a royalty of 1 kopeck (about 3d.) per pound (36 lbs.), and a minimum royalty of 5000 roubles, or about 666l. per annum, payable after the blast-furnace has commenced work. This property will also supply the company with a corresponding amount of good iron ore. The directors are advised that pig-iron can be made on this property more economically than at Vukaska. It is within 20 miles of the present works; it will supply a large additional quantity of pig-iron, and it is to be remarked that any profit derived from these works will belong exclusively to the company, and will not have to be divided with the lessors of the Vukaska estate. Having regard to the acquisition of this property, it is extremely fortunate that the company has the power, under the Articles of Association, of carrying out works in places other than Vukaska, as this has enabled them to acquire the value of the company's property, and will add very materially to their profits; but the directors allude to possible legal questions in connection with the company's contract with the late proprietors of the Vukaska property, which may reduce the net profits of the company in respect of those works. At the date of the last general meeting, on Jan. 11, 1867, the Vice-Chancellor Sir Wm. Page Wood, and also the then Lord Justices of Appeal, had decided the points in litigation in favour of the directors, and the decision was agreed to by the shareholders. In consequence of proceedings being taken in about 150 cases at the same time, that the directors advised, and the general meeting sanctioned, the compromise adopted and approved at the meeting. Since that time the law, as pronounced by the highest courts, has materially varied from that laid down in these cases by Vice-Chancellor Sir Wm. Page Wood and the then Justices of Appeal; and the decisions have been pronounced in law by the highest courts, but the shareholders have not been in accordance with the law, the company would now be able to divide a very handsome dividend. All litigation between the company and its shareholders is at an end, and they are in possession of a most valuable property in Russia. It is, however, most desirable, if not actually necessary, to provide for the debentures as they become due, without absorbing, for this purpose, the whole or the greater part of the company's profits. Nearly one-third of the debentures issued became due in January, 1867; and one-third, or one-third, in January, 1869, and one-third, or one-third, in January, 1870. Provision has been made for the payment of the instalment due next month, but it is clearly necessary, at an early period, either to make additional calls on the shares of the company, or to issue new capital. The directors have decided to recommend the shareholders to authorise the issue of 11,264 shares, of 10l. each, with a guaranteed fixed preferential interest of 10 per cent. per annum; and as it is more than probable that the ordinary shares will earn a dividend beyond 10 per cent., these new shares will have the privilege of conversion into ordinary shares, at the option of the holder, at any time within five years, with the same amount paid as is paid on the preference shares. These preference shares to be offered, in the first instance, to the shareholders, and such as may not be taken by them to be at the disposal of the directors, to issue on such terms as they may think fit, in exchange for debentures, or to the general public.

The CHAIRMAN, in moving the adoption of the report, apologised for the delay which had occurred in the circulation of the accounts and other printed documents. It was intended to post them before, but had not unavoidable circumstances prevented. They had to send out to Russia for vouchers, and there was some slight misunderstanding with the auditors; the directors believed that both auditors were making the examination simultaneously, but subsequently found that they had been working independently, and that one of them had not completed the audit when the directors thought all was ready. They had had the accounts and vouchers prepared in the fullest possible form, and he believed they gave all the information they could desire. As to the contract which had been undertaken for the Russian Government, he might state that if it gives only the ordinary trade profit it will be advantageous to the company. The Russian Government are not only good paymasters, but have also furnished the company with the necessary capital to erect the machinery for making their rails. The value of their Vukaska property was very great, it was established in the last century by Potemkin, who had undertaken the damming up of the water courses, &c., so as to give the works ample water power, which was highly important to them in rendering steam power unnecessary, and had altered the configuration of the country. This was done when serf labour was obtainable; but had it now to be done it would cost more than they had paid for the entire property. They had a most excellent business at Vukaska, and readily found a market in Central Russia for all their pig-iron, bar, and wire, at a remunerative price and for ready money. But he had doubted the wisdom of the directors in carrying out their contract with the Russian Government without the Koulabak property, which they had secured upon very good terms. The pig-iron would be produced at Koulabak, and the

rails manufactured therefrom on their original property; the pig would be much cheaper at Koulabak than at Vukaska. The average cost of producing a ton of pig at their other works was 37. 14s. 8d., whilst at Koulabak, which was within easy reach of their other works, they would make it for 27. 1s. 3d. The difference of 10. 13s. 5d. per ton would be an important item in their profits, more especially as the Vukaska profits were divisible with the former proprietors, whilst the Koulabak profits would all belong to the company. As to their legal position, he need only say that had they not been able to go beyond Vukaska, which was the power complained of, they would have been compelled to throw up the contract with the Russian Government. As to their financial position, they had cleared off their debt at St. Petersburg, they had reduced their debt to the Bank of London to 10000l., and to the London and County Bank to 25000l., since the date of the report. The purchase money, which was to have been 60,000l., was practically reduced to 40,000l. by the forfeiture of vendors' shares. They had to pay 40,000l. in cash, and 20,000l. in shares, representing 5l. paid. As the second call of 5l. upon these shares had not been paid, the directors decided upon forfeiting them, as they saw no prospect of recovering the calls upon them. Their general position was far better than it ever had been. During the last two years the directorship had been no sinecure, but he was glad to say that litigation had now ceased, they had no pressing debts, and were now at no man's mercy. They had a most valuable property, which is gradually improving, to derive their dividend from the whole, and he believed that for more money than they could get; the directors, therefore, propose to divide 6 per cent. per annum, which would leave them something for improvements. He then moved the reception and adoption of the report.

Mr. JOSEPHS carefully analysed the accounts, and observed that the item of 100,000 roubles for buildings and repairs should have been charged to revenue, and not to capital account. He also enquired why the Koulabak property was not included in the accounts. He believed that when all necessary deductions had been made that the 10,000l. represented as profits would be made very much more than the 10,000l. represented in London cost of the 5000l. per month's working. As to getting accounts from Russia, there might have been some difficulties, but he would ask why they could not be kept in duplicate? It was not customary with merchants to ask even for duplicate invoices, that one might be forwarded to the customer and the other kept; and he could see no difficulty in the company adopting a similar course. An increase in expenses, especially in salaries, had been noticed, and he observed that the directors' fees were 4500l.; he did not wish to see a different board of directors, but he would certainly like to see them accept a smaller amount of remuneration until the shareholders generally got a better return for their money.

The CHAIRMAN explained that the buildings and repairs at Vukaska could not be put against profit and loss; and as to the only on the Koulabak property, the same answer would apply. Mr. Josephs must recollect that the 4500l. directors' fees extended over 2½ years, and all he could say was that he would be glad to vacate his seat for anyone who had an equal interest in the company.

Mr. KEMP, auditor, confirmed the Chairman's views. He thought the best evidence of the accounts being lucid was the fact of Mr. Josephs being able to enter so fully into the discussion of them. With respect to the law costs and other items, which might be regarded as costs of establishment, appearing among the value of them, he could not see where else they could appear; the shareholders knew of these worthless assets by degrees was correct. As to buildings and repairs, he did not believe that anything had been carried to capital account, which did not properly belong to it. The preliminary accounts appearing as assets should, he thought, be got rid of as quickly as possible; they should not divide large profits until the company was in a solid and sound position. The report and accounts were then put and carried, and the retiring auditors re-elected.

At the special general meeting, held immediately afterwards, for the purpose of restoring the share register to the number of the original issue, by dealing with the shares returned to the company, by those struck off the register by decision of the Court of Chancery. The CHAIRMAN explained that special resolutions, under the decision of counsel, were submitted, and expressed the hope that the meeting would see the desirability of passing them. The restoration of the share list was necessary to prevent the company being registered as a reduced company; and it was, moreover, desirable to increase the share capital, in order to pay off the debentures. The registration of the company as a reduced company would materially damage their credit in Russia, and, therefore, interfere with their business. It was not proposed to issue the whole of the shares created at the present time, but only as might be found necessary. He then moved that the resolutions be adopted.

Mr. MITCHELL cautioned the shareholders that if they passed those resolutions they would make over the company's property to the directors, and he was advised that if they were passed any shareholder could prevent their being carried into effect by an injunction in Chancery. Mr. JOSEPHS concurred. It was also new to him to borrow money at 10 per cent. to extinguish a debt bearing only 4 per cent. That 10 per cent. would take 5500l. per year of their profits.

A lengthened discussion ensued, and it was ultimately resolved that the said 5532 returned shares of 20l. each, respectively be absolutely cancelled, and shall no longer represent any portion of the capital of the company; that in place of the said 5532 shares the directors be authorised to issue 11,264 shares of 10l. each, and to make arrangements on the issue of such shares for a difference between the holders of such shares (and the holders of other shares in the company) in the amount of calls to be paid thereon, and in the time of payment of the same; that the directors be authorised to issue the 10l. shares upon which the same proportionate amount shall be deemed to be paid as shall have been for the time being actually paid upon the 20l. shares; that the proportion between the amount which is paid and the amount unpaid shall be at the time of issue relatively the same; that the directors may receive the whole or any part of the amount of such 10l. shares in advance of calls, and in case the whole amount be advanced such shares shall be deemed fully paid-up, and the directors may pay dividends or interest at such rate as the member advancing and the directors may agree upon; that the directors be empowered to enter into such arrangements with the holders of such fully paid-up shares, or any portion thereof paid in advance, and to guarantee on behalf of the company the payment of such rate of interest or dividend not exceeding 10l. per cent. per annum upon such shares; that the warrants of such 10l. shares be receivable at par at any time in payment of calls on ordinary shares; and that the company's Memorandum of Association be so modified as to authorise the matters contained in the resolutions.

Upon the resolutions being put, Mr. JOSEPHS demanded a poll, which resulted in the resolution being carried by 1130 votes against 75.

The CHAIRMAN stated that 650 of the votes in the majority were proxies, 200 from Colonel French, who was prevented from attending the meeting, and 450 from other parties. The meeting then separated.

## Royal School of Mines, Jermyn-Street.

## MR. WARINGTON SMYTH'S LECTURES.

[FROM NOTES BY OUR REPORTER.]

LECTURE XV.—Mr. SMYTH had already spoken of the waste of time and the expense consequent upon the breakage of rods and loss of the cutter at the bottom of deep bore-holes; and the still greater hindrance of having to occupy six or eight hours in a day by the removal and unscrewing the rods while the bore-hole was cleared of the material broken down by the cutting tool. This long ago suggested the enquiry whether or not it would be possible to do without it, and that enquiry was much stimulated by a statement, in 1827, to the Royal Academy of Paris, that the Chinese bored by means of ropes with considerable advantage. Rope-boring was then tried, and was extremely successful in holes of moderate depths; but it was fraught with so much risk as not, after all, to compare well with the system of rigid rods. Its mode of application was by means of a spring pole, placed with its end over the hole, and arranged so as to give the required percussion; but it could not be so well guided as to make sure that the hole would be quite cylindrical, and its enemies averred that a great many had failed for want of perpendicularity. Notwithstanding the statement made by some French Jesuits stationed in China, that bore-holes were made upon no other principle to a depth of 3000 feet—a depth not exceeded, except in one case, that of Creusot, in France—the French at home very much doubted the account, which eventually induced the Jesuits to take steps to verify it, and it was really found to be the case in more than one instance, where the holes were sunk to that depth for the purpose of obtaining brine. The consequence was that the Chinese and other methods of working by the aid of a rope came much more into use. The great advantage of a rope apparatus was its adaptability, and some astounding results had come out in cutting through chalk in France, which had been done for 3 fr. per foot, and progress at the rate of from 30 to 50 ft. per day had been made. The early borers employed a hempen rope, but in the Hartz a round wire-rope had long been in use. The most successful form in England was the flat wire-rope, invented by Messrs. Mather and Platt, connected with an ingenious arrangement, by which at every blow the cutting tool was made to change its position. Chains were sometimes used, although they were far too heavy. The Chinese employed a kind of bamboo rope, of the fibres of the aloe were used in Belgium with great advantage. If, however, true statistics could be procured of the results of rope-boring, there would be found to be more failures than was generally supposed,—cases in which the rope having broken, and the boring tool left inextricably at the bottom, had had to be abandoned. The lecturer then exhibited specimens of cutting tools, and the mode of application, expressing particularly a high sense of the value of the system of cutting out "cores," so as to show exactly the thickness, and nature of the beds, and also their dip. This was done by cutting a groove, as it were, all around the sides of the bore-hole, leaving the middle standing, and then, after a little undercutting, by the introduction of powerful claws at the bottom pulling away the whole mass. A very successful instance of this kind of cutting took place at Middlesbrough, by Mr. Marley. At 300 fms. deep he came to a bed of rock-salt, and then, by various tools and much skill, he brought up a core of unusual length, which furnished an admirable means of accurately judging the nature and value of the strata. The lecturer then described the subject of bore-holes, he must allude to those remarkable cases the apparatus for which attracted so much attention from the scientific visitors to the French Exhibition, in which shafts of large diameter had been cut in the same way as sinking bore-holes. The first instance on record occurred 20 years ago, in Westphalia, when a bore-hole was made so large that it could be conveniently used as a shaft. The great advantage to be gained by this principle was that there was no occasion to withdraw the water from the shaft, which being left established a counterpoise to the pressure of the water in the beds through which the perforator passed, and thus enabled the work to be done much easier. It was of immense advantage in that way while sinking through watery ground, or beds of quicksand, where, perhaps, in spite of all the pumping power brought to bear, it might be impossible to put down a shaft. With a bore-hole the sinking went on with the hole full of water, proper tubing only being requisite to secure the sides. He remembered a case in the Department of the Moselle, in the collieries at St. Avold and L'Hopital, where at 170 yards from the surface, and under difficulties of this sort, it was determined to adopt the plan of boring out the shaft, and the result had been perfectly successful. The subject of boring was one of great interest, and no one who visited the Paris Exhibition



LECTURE XXV. It would naturally suggest itself to those who attentively considered the subject of the last lecture, and the modes in which slow and laborious progress was made by the miners through hard rocks and difficult ground, to enquire whether it would not be possible to use some other power than that of human muscles for a work which, at first sight, seemed to be one of mere mechanical exertion. It was not surprising, therefore, that many years ago a machine should be invented for the purpose of cutting or holling the seam. The inventor was Mr. Peace, of Wigan, whose name was well known in the earlier history of mining enterprise in the North of England. The colliers called it "the iron cut," and, worked by steam, it was applied simply for the purpose of under-cutting, and the difficulty of the work was thus got up and made. A considerable period elapsed before any further effort was made in this direction, so that within half-a-dozen years, however, many different schemes to effect the same end had been proposed, but, although some of them had advanced to a much greater state of completeness than others, they could not generally be recommended for application on a large scale. The question, however, at the present moment was rendered of the utmost and the gravest importance, partly by the high rate of wages and the difficulty of obtaining work from the colliers, that the masters had thought it a duty incumbent upon them to make efforts to obtain a more powerful apparatus, worked by steam or water power or by compressed air, to accomplish the primary work of the colliers—viz., the under-cutting or kirving of the seam. Amongst these recent machines, two or three depended upon the application of an implement very much like the holling-pick of the collier, but made of a greater strength, connected with a small portable engine, which could be run on the surface, and away right along the whole length of the seam, and so to the underground, and undergone trials of varied intensity and duration, and although it had been proved that they did a large quantity of work in a given time, as much, perhaps, as would take from 10 to 20 men to do by the ordinary means—so that where a machine of this kind could be conveniently brought into the workings and continuously employed without doing injury to the other works of the mine, and not requiring frequent repairs, a great gain would be achieved practically. It was, however, in the case of the machines having all the general faults of the steam engine, that the great object of the present point aimed at by all was to do what was called "kirving," or to cut the coal horizontally along the bottom of the seam, and then manual labour had to be employed to make the vertical cut, or "shearing." Messrs. Jones and Levick, however, attempted to meet this objection by placing their picks upon a universal joint, so that it would cut either horizontally or vertically or at any inclination, so as to follow the inclination of the seam. Great difficulties, nevertheless, attended the employment of the steam engine in the colliery, the weight of the machinery new were done in this direction it would be by compressed air, which would be the best atmosphere, and otherwise interfere with the comfort of the workmen. Some years ago a circular saw was proposed, on a theory which seemed feasible enough, but it did not succeed in practice. One system, highly spoken of, was that of actually cutting out the coal by strong curved chisels, or scoops, fixed to a strong iron bar, made to protrude from a rotary disc. This method had been introduced for a considerable time, and was worked by hydraulic pressure. It was not, however, so much into the subject as the steam engine, as we were in a transition state, and, in order to stimulate inventors to turn their attention to the matter, the coalmasters of South Lancashire had proposed to give a handsome reward for the best coal-cutting machine, to be reported upon by a committee of practical judges. The result had been that several machines had been sent

Another mine that would direct attention to is **SOUTH FOWEY**. It is situated in one of the best mining districts in Cornwall, and the principal shareholders are men of the first position in Cornwall, including the representative of the Eastern division of the county, Mr. Kendall. Mr. Treffry is also a large holder in the mine. The name of Treffry in Cornwall is synonymous with every-thing in legitimate mining shares. With Fowey, the Cornish gold-mining district, while the prospects of the mine are excellent, and, therefore, strongly advise a purchase of the shares at once, at about 7s. 6d. to 10s. Gold mines are still in vour with a large portion of the public, and will I think, continue to command attention. The **PESTERENA MINES** are returning large quantities of gold, which the course of two or three months are likely to be augmented. The shares are very cheap at par to  $\frac{1}{2}$  prem. **CHONTALES** keeps firm notwithstanding the various attempts that have been made, and the industrious circulation of reports injurious to the property. I have very tangible proofs that the manager, Mr. Paul, entertains no extravagant expectations of realising all that has been procured, and that he entertains no delusive hopes of a sudden rise in the price of the shares.

From Mr. J. BREYENOLDS:—I am very glad indeed to say that the mining interest is "looking up." This fact must be exceedingly satisfactory to those who have sustained it through good and evil report. People are doubtless beginning to see that "Mining as an Investment" is practically that sort of thing which is profitable when a judicious selection is made, and that the risk the investor runs cannot be compared with that incurred by those who go into financial, railway, and other companies of a like standing. On the market more business is being forward, but prudent people consider carefully before patronising those concerns which are supported by "hot bulls" or "bulls," and "bear" men. The time of the system has received a very wholesome check, however, and the "pay cash, with immediate delivery" plan, is most in favour. Many mines, in a splendid position, are rarely quoted, and there seems to be little disposition on the part of the *bona fide* proprietors to encourage market operations, which, as a rule, end in the disappointment of everybody except the operators. My correspondence from the mining districts is very encouraging. Indeed, I have often referred to WEST ST. IVES, and if I do so again it is because of the success which has attended the operations of the mine, and the result, which, considering all circumstances, has much greater chances of success. It can be worked very cheaply, and indeed is. There are, moreover, no elements calculated to mar the prosperity of the concern. Of course, it is, comparatively speaking, a little affair, and the shares are very low. The official report from WEST WHEEL KITTY stated that the next sale of tin would be about 4 tons. I suppose this will realise about 40*l.* per ton. West Wheel Kitty richly deserves vigorous prosecution. It will be seen hereafter that it is a great property. GREAT LALAGE is also doing well, and the prospecting parties are still at work. The proprietors richly deserve that success which now awaits them. Persons on whose judgment I place great reliance speak with much confidence of WHEAT AGAR, and it is worthy of remark that a quick success is by no means unlikely. The progress of EAST LOVELL must afford pleasure to all who have the welfare of the district in which it is situated at heart. AT COLQUITE AND CALLINGTON UNITED, if the lode on the Colquite side be cut good, as anticipated, there will be quickly opened up a capital property. THE NEW BRIDGE PROPERTY is also promising, and is fitted to be, as a rule, by gentlemen who appear to know all about the property. There are, however, a few shares offering, which may be picked up without much trouble. A gentleman writes this morning concerning the mine that all are in very good spirits, and that he is greatly pleased at the result of the thorough investigation made that day. A special inspection has been made of ROSE AND CHIVERTON UNITED. It is right that the shareholders should first have the benefit of it. It is even more conclusive that any such hole ever come to light, and that it is not yet too late for the owners to take advantage of the opportunity they will be opened up to exhibit one of the finest centres Cornwall has ever produced. A happy New Year to all.

## MINING NOTABILIA

[EXTRACTS FROM OUR CORRESPONDENCE.]

**NORTH WHEEL BASSET.**—This company stopped their works on account of the low price of tin nearly two years since, and the committee of management considering the mine completely developed after eight years and more of indefatigable industry, and not wishing to throw the produce away at so low a price. The levels are all full of ore, and now that tin is much higher the works will soon be resumed, and with every prospect of early dividends.

**REVIVAL IN CORNHILL MINING.**—The first pay-day of the Boscawell Mine (St. Just) under the new management was celebrated by an adventurers' dinner and miners' treat, and the day's rejoicings were complete. A large quantity of tin has from time to time been sold from the mines, but the long-continued depressed state of the tin market had led to their suspension, and Mr. E. S. Boyce, of Penryn, and his partners, who have bought the mine for 3000*l.* (1500*l.* for the material in the underground), have brought the mine for 3000*l.* (1500*l.* for the material in the underground). The reports of those best able to judge of the pro-

spects of the undertaking speak of it in high terms, and express their earnest belief that there still remains in the mine thousands of pounds worth of tin. The place has been put in working order, and everything looks as if the tin miners were about to begin business. At the same time, the tin previously sold at a low price is now selling at a high one, thus giving good evidence that better stuff had turned up. In proposing the toast, "Success to the Boscawell Mines," Lieut. Boyas said he was extremely glad that Boscawell was at length to be worked in a proper manner. With no reflection on those who had previously held the mines, he must say it was certain that they had not been worked as they should be. From want of capital the tin mine owners had not been able to work them as they should have done, in a most noble manner the new adventurers had commenced their work, and after that could they think that they would flash in the pan? There was sympathy with the management, and he hoped that they would turn out something substantial. Tin, they knew, was not the price it ought to be, but still they could go on producing, and he trusted that the supply of tin last year was not equal to the demand, and when this was the price must rise; and he hoped the price would go on rising, that the new adventurers would be able to sell at a minimum of 70 to a maximum of 100 or more. In response to the toast of "The Agents, Capts. Eddys and Noy," the former gave an account of the tin workings, and expressed his belief that there was enough on the surface to pay the cost of the (broken) tin to pay costs for a long time, but that, with a judicious outlay, there was a splendid mine, which would reward its proprietors for many years.

Messrs. Hancock, Sharp, and Hales, the mining solicitors, have removed from Birchln-lane to more convenient offices—73 and 74, King William-street, corner of Clement's-lane.

The Bank of England returns for the week ending on Wednesday evening shows in the ISSUE DEPARTMENT an increase in the "notes issued" of £34,643,000, represented by a corresponding increase in the "coin and bullion" on the other side of the account. In the BANKING DEPARTMENT there is shown on the liability side of the account an increase in the "other deposits" of 2,888,767; on the "seven day and other bills" of 22,368; and in the "rest" of 51,264; of course, 2,962,398; and a decrease in the "public deposits" of 864,554; of 1,097,847. On the asset side there is an increase in the "other securities" of £2,606,510; and in the "Government securities" of 249,843; = 2,856,353; and deducting therefrom the increase on the other side of the account, there remains a net increase in the reserve of 768,509.

**HOLLOWAY'S PILLS—MEDICINAL EXCELLENCE.**—To purify both solids and fluids composing the human body, to cleanse without weakening, and stimulate without irritating any torpid organ, to confirm each regular, and correct each faulty, function are the merits claimed for Holloway's Pills. And how wonderfully they display these qualities is experienced by multitudes, who voluntarily record the cures this purifying medicine has effected. As to the so-called bilious, these Pills are especially serviceable in restoring the secretions to their normal state, and clearing the system through the bowels. Holloway's Pills have proved themselves to be the greatest blessings to thousands labouring under a complication of nervous and hypochondriacal symptoms which were slower and certainly wearing out both body and mind.



## BRITISH MINES.

**GOTHIC.**—J. Lester, Jan. 1: I am glad to inform you that the repairs of the pit, occasioned by the falling of about 400 tons of earth, are completed, and the water is out of the mine, all but about 6 feet in the 40 fm. level. The men have

at 130, at 9f. per fm. The 130 cross-cut, north from the engine-shaft, is progressing favourably; driving by nine men, at 13f. per fathom. Our prospects are much improved.

the moment we have holed we shall, of course, resume driving the deep adit, when the working expenses will be considerably lessened, and our prospects, I hope, begin to brighten.

**ROARING WATER.**—H. Thomas, Dec. 31 : In consequence of the holidays we have not sunk as much as usual during the past week, but by extra working I







crease has been entirely in railway-borne coal, the sea-borne coal actually showing a decrease of 16,777 tons. There is at present a good supply stored both at coal depôts, and by the gas companies for future consumption. The past and present position of the coal trade is a subject for congratulation rather than otherwise.

**THE TIN TRADE.**—Mr. L. Th. van Houten (Rotterdam, Dec. 30) writes:—Our Tin market during this month has been very quiet, with little business doing, as is generally the case at this time of the year, and, being influenced also more or less by unfavourable politics, a decline took place towards the latter part of the month, though during the last few days prices have somewhat rallied, and the tone is decidedly firmer, with very little offering. Drawing special attention to the small quantity of Banca tin actually offered from Java, which has been about 257 tons, the official stock to-day being only 35,568 slabs, there is every probability for a small Spring sale. In the beginning of the month sales took place of Banca tin at 54½ s., giving way to 52½ s. towards the end of the month. Several orders, however, coming in at this reduction caused a better demand during these last days, and the market closes steady at 53 s. In Billiton tin we have also only a limited business to report, a few lots having been sold in the beginning of the month at 53 s., but since then no sale has taken place, the market closing nominally at 52 s. The position of Banca tin in Holland on Dec. 30, according to the official returns published by the Dutch Trading Company, is as follows:—

	1867.	1868.	1865.
Import in December	11,592	3,910	3,470
Total twelve months	111,542	191,869	183,070
Deliveries in December	75,000	9,000	12,000
Total twelve months	127,830	100,000	100,000
Stock second hands (old warrants)	151,109	131,109	96,859
Total stock	186,677	195,643	190,629
Stock Billon.	508 1/2	15,896	6,200
Quotation { Barren	53 1/2	50 1/2	50 1/2
Dec. 30 { Billiton	52	49 1/2	55

\* Of which 1422 slabs were Billiton.

The preceding returns compared with those of 1886 exhibit—An increase of the import for December of 246 tons, a decrease of the import for the 12 months of 204 tons, a decrease of the stock second hand of 13,200 tons, a decrease of the deliveries for the 12 months of 2978 tons, an increase of the stock second hand of 640 tons, a decrease of the unsold stock of 927 tons, a decrease of the total stock of 287 tons, an advance of the quotation of Banca of 47. 11s. 8d. per ton. The quantity of Banca tin now afloat for the Dutch Trading Company is only 567 tons. The Government returns for the month of October are as follows:—

EXPORT OF TIN FROM HOLLAND.										
October.										
	1867.				1866.				Ten months.	
	1867.	1866.	1865.	1867.	1866.	1865.				
Germany ..Tons	1895	326	188	1977	1860	1452				
Belgium ..	46	158	84	222	375	373				
England ..	46	158	30	222	686	456				
France ..	112	185	189	826	1313	862				
Hamburg ..	45	79	16	237	281	167				
United States...	40	81	31	67	243	188				
Other countries..	164	223	46	351	492	347				
Total, Tons	662	1095	484	4129	5250	3851				

**THE COPPER TRADE.**—Messrs. Vivian, Younger, and Bond (Jan. 3) write—Since our last a good business has been done in Chili bars, as far as quantity is concerned, but prices have suffered to the extent of about 1l. per ton. Towards the latter end of last week between 500 and 600 tons of bars were sold to arrive, but the price has not been allowed to transpire. Besides these, 300 tons were sold, first at 68s., and lastly at 67s., which must be considered the present price. About 350 tons of refined ingots were quoted from 74s. at Swansea down to 72s. in Liverpool. By tender 850 tons of Chili ore fetched 15s. 10d. per unit. The market has been rather depressed in consequence of the news of civil wars having been effected in Chili for 2600 tons of fine copper during the first half of October, which is considerably above the average. Business in English raw and fine foreign has been very limited.

The MINING SHARE MARKET this week has considerably improved, both in activity and tone, and on Thursday a demand sprung up for several mines at advanced rates, among which were Prince of Wales, Chiverton, West Chiverton, Chiverton Moor, North Crofty, West Prince of Wales, Carn Brea, East Grenville, Grenville, North Treskerby, Great South Tolgus, Clifford Amalgamated, Wheal Mary Ann, East Gunnislake and South Bedford, Great North Laxey, and a few others. Prince of Wales shares have been in good demand, and leave off 53s. 6d. to 55s. 6d.; the 55 end east has improved to 50 $\frac{1}{2}$  per fathom, and the 55 west to 25 $\frac{1}{2}$  per fathom. In the 55 fm. level cross-cut north there is a large increase of water, which has drained the other parts of the level, and leads the agents to think the north lode is not far off. West Prince of Wales have also been enquired for at 9s. to 10s. Carn Brea shares have been dealt in at 22 to 24. Chiverton firmer at 5 $\frac{1}{2}$  to 5 $\frac{1}{4}$ . West Chiverton, 66 to 68. Chontales Gold, 3 $\frac{1}{2}$  to 3 $\frac{3}{4}$ . Wheal Grenville shares have advanced from 23s., 25s. to 27s., 29s.; the report received from the agents on Friday, Dec. 27, stated "they could see no change in the mine," but at 4 o'clock on Saturday afternoon (Dec. 28) a printed circular from the office of the company informed the shareholders that a telegram had been received stating that a course of copper ore had been cut in the 90 west, worth 2 $\frac{1}{2}$  tons per fathom, and the winze below this level had also improved to 18 $\frac{1}{2}$  per fathom. Prior to this becoming known the shares, owing to the conditional forfeiture and forced sales of a large number, had been flat at 23s. to 26s., and as numbers also appear to have been purchased only a few hours before the circular announcing the improvement was made known, it would seem the information had somehow oozed out, and that advantage was taken of it. This gave rise to some comments on the market, and it is suggested that in future telegrams (as in other offices) should be made public as soon as received. The report, dated the 2d, states "No chance since our last."

Clifford Amalgamated,  $\frac{5}{8}$  to 6; Drake Walls,  $\frac{3}{4}$  to  $\frac{1}{2}$ ; East Basset, 10 to 11; East Caradon,  $\frac{4}{5}$  to 5; East Carn Brea,  $\frac{2}{3}$  to  $\frac{2}{5}$ ; East Gunnislake and South Bedford,  $\frac{1}{4}$  to 2; East Lovell, 8 to  $8\frac{1}{2}$ ; East Russell,  $\frac{1}{4}$  to  $\frac{1}{2}$ ; East Wheal Grenville,  $\frac{1}{8}$  to  $\frac{1}{4}$ ; Frontino and Bo livia, 16s. to 18s.; Great Laxey,  $\frac{1}{4}$  to 18; Great North Laxey,  $\frac{3}{8}$  to  $\frac{3}{4}$ , and in request; Great South Tolgus, 22s. 6d. to 25s. New Lovell, 7s. to 9s.; the lode in the 40, east of Hill's, we hear, is worth 20s. per fm.; the lode in the rise in the back of the 40 east is worth 25s. per fm.; the lode in the 63 east, 12s. per fm. Great Wheal Vor,  $\frac{1}{4}$  to  $\frac{1}{2}$ ; Marke Valley, 6 to  $6\frac{1}{2}$ ; New Seton, 65 to 70; North Chiverton, 4 to  $\frac{1}{2}$ ; North Crofty,  $\frac{2}{3}$  to  $\frac{2}{5}$ ; North Downs, 16s. to 18s.; North Treskerby, 29s. to 31s.; Providence Mines, 26 to 28; Redmoor, 1s. to 3s.; South Frances, 25 to 27 $\frac{1}{2}$ ; Stray Park,  $\frac{3}{4}$  to  $\frac{3}{8}$ ; Tinicroft, 13 to 14; West Basset, 2 to  $\frac{1}{2}$ ; West Caradon, 10 to 11; West Drake Walls, 6s. to 8s.; West Frances, 8 to 10; West Seton, 190 to 195; Wheal Basset,  $\frac{7}{8}$  to  $8\frac{1}{2}$ ; Wheal Mary Ann, 19 to 20; Wheal Seton, 80 to 85; Wheal Trelawny,  $\frac{5}{8}$  to 6; Maes-y-Safn, 27 $\frac{1}{2}$  to 30. Wheal Buller, 15 to 17; an important improvement has taken place in the 60 west, on the north branch, which is now worth 2 tons of rich copper ore per fathom, and driving at 3s. per fathom.

At the commencement of 1867 we had just passed through one of the severest panics ever known in commercial circles, and mining business had for some months been adversely affected by losses incurred by the investing public in financial and other companies, and by the low prices of copper and tin, brought about by the increased production of foreign mines, and the restricted demand for metals, consequent upon the commercial disasters. Business, however, was again looking up, and in our first article of the year we had the pleasure of announcing a rise of 5*l.* per ton in copper, and also of 5*l.* in tin. These had given life to the market, and for a time business was active, and seemed more hopeful for the future. Looking at the year just ended, however, as a whole, it has been one, as regards the mining interest, of great changes and fluctuations, but of no great successes, and depression and inactivity have been the ruling features. When money was at 10 per cent. there was more business doing in shares than when it stood at 2, but it is some satisfaction to the mining interest to know that the disinclination on the part of the public to invest even in the soundest undertakings has not been confined to mining, but has pervaded every class of securities, many of which have suffered far more than any mining company that we know of.

During the year the standard for copper ore has fluctuated more than usual, one week going up 2½, or 3½, leading the miner to hope for better prices, and then the next week dropping as suddenly, even more than it had previously risen. In the first sale of January it stood at 107½ ds., at a produce of 6½, and at the last 104½ 2s., at a produce of 7½.

Tin has been firmer and steadier during the year, and the price better now than it was 12 months ago. Lead has not been quite so good. In shares a great many fluctuations have taken place, especially in mines which have been largely speculated in by dealers on the market, but many permanent advances have been maintained. South Caradon, after having paid 17,918*l.* in dividends, stands 400*l.*, against 300*l.* per share 12 months ago. West Chiverton shares



have risen from 52 to 71, and stand now at 67, after having paid 24,000*l.* in dividends during the year. Prince of Wales, to the merits of which we have directed attention in this article since the shares were at 1*s.* 6*d.* each, have risen from 26*s.* to 70*s.*, and now stand at 52*s.*, after paying 3*s.* 6*d.* per share in dividends. Great Laxey has fluctuated very little, and the shares are within a trifle of what they were last year, after paying 30,000*l.* in dividends. Great Wheel Voss have risen from 15 to 17, after paying 8862*l.* in dividends. West Setons have advanced from 125 to 195, and paid in dividends 8200*l.* Wheel Setons have declined from 140 to 87, and have paid 6732*l.* in dividends. Among smaller and more speculative mines there has been several great rises, among which Retallack rose from 1 to 5; Carn Brea, 8 to 28; East Gunnislake and South Bedford from a mere nominal price to 40*s.*; Great Fortune, from nothing to 7; South Tolgus, 7*s.* 6*d.* to 2*s.*; West Basset, 18*s.* to 2*s.* Thirty mines paid dividends in 1867, amounting in the aggregate to 268,258*l.* 9*s.* Among foreign mines not included in the above, St. John del Rey Gold Mines paid 96,250*l.*; and Don Pedro del Rey Gold, 38,000*l.*

## LIST OF DIVIDENDS PAID BY BRITISH MINES IN 1867.

No. of shares.	Dividend per share.	Total.
1200 Alderley Edge	20 0 0	24,000 0 0
4000 Brookwood	0 5 0	2,000 0 0
1000 Bronllyd	0 16 0	1,600 0 0
128 Cwmystwith	2 0 0	2,560 0 0
867 Cwm Erfin	3 0 0	2,601 0 0
509 Croesbrawle and Penkell	1 0 0	509 0 0
1024 Devon Great Consols	39 0 0	39,936 0 0
358 Doleath	19 0 0	6,804 0 0
280 Derwent	5 0 0	1,400 0 0
656 Ding Dong	0 10 0	6,560 0 0
300 East Darwen	6 0 0	1,800 0 0
128 East Pool	25 0 0	3,200 0 0
1906 East Lovell	1 4 2	2,302 15 0
6144 East Caradon	0 6 0	1,843 4 0
2800 Foxdale	1 0 0	2,800 0 0
5808 Great Wheel Voss	1 10 0	8,862 0 0
15000 Great Laxey	2 0 0	30,000 0 0
1024 Herodfoot	4 10 0	4,100 0 0
4295 Kitty (St. Agnes)	0 4 0	1,718 0 0
400 Lisburne	3 0 0	1,200 0 0
9000 Marke Valley	0 12 0	5,400 0 0
1800 Minera	18 5 0	34,555 0 0
3000 Maes-y-safn	2 0 0	6,000 0 0
1120 Providence	2 5 0	2,820 0 0
6300 Prosper United	0 5 0	1,500 0 0
12800 Prince of Wales	0 3 6	2,210 0 0
496 South Frances	2 0 0	992 0 0
512 South Caradon	35 0 0	17,918 0 0
6000 South Darwen	0 3 0	900 0 0
508 Summer Hill	0 17 6	444 10 0
2000 Trumpet Consols	1 0 0	2,000 0 0
6000 Tincroft	0 15 0	4,500 0 0
400 West Seton	20 10 0	8,200 0 0
3000 West Chiverton	8 0 0	24,000 0 0
396 Wheel Seton	17 0 0	6,732 0 0
512 Wheel Basset	7 0 0	3,584 0 0
1024 Wheel Mary Ann	3 0 0	3,072 0 0
3000 Whitwell	1 0 0	3,000 0 0
17000 Wicklow Copper	1 15 0	29,740 0 0
Total		£268,258 9 0

There has been an increased business doing in the Mining Market on the Stock Exchange during the week, and prices in many instances have advanced. It would appear that the public generally are inclined to look upon mining investments with more favour. Pestarena United, Don Pedro, Rossa Grande, Port Phillip, and Central American have been in especial request. Frontino and Bolivia and Chontales have been dull. Referring to our remarks last week we find that the amount of gold remitted by the agent of the Pestarena United Gold Mining Company since the amalgamation in March last is as follows:—

May 10.....	Ozs. 1308-975	Realising £ 4,286 13 0
June 15.....	1154-950	3,820 16 7
July 24.....	1111-200	3,594 12 0
Sept. 6.....	1062-500	3,546 1 3
Oct. 15.....	1045-150	3,458 13 2
Nov. 6.....	454-725	1,515 2 2
Dec. 17.....	1045-675	3,461 10 2
Ozs. 7183-175		£23,783 8 4
Advice of upwards of 450 ozs. on its transit to office (say)		1,500 0 0
Total.....		£25,283 8 4

This is at the rate of about 3300*l.* per month, or 40,000*l.* per annum. The following are the closing quotations:—St. John del Rey, 57½ to 58½; Don Pedro, 2½ to 2½ prem.; Anglo-Brazilian, par to ½ prem.; Pestarena, ½ dis. to ½ prem.; Chontales, 1½ to 1 dis.; Rossa Grande, ½ to ½; Rossa Grande (paid up), ½ to ½; Anglo-Italian, par to ½ pm.; United Mexican, 1½ to 1½; Frontino and Bolivia, ½ to ½; Port Phillip, 1½ to 1½, having been in request, in anticipation of the forthcoming dividend; Central American, ½ dis. to par; Anglo-Argentine, ½ to ½ prem.; English and Australian Copper, ½ to ½; Panulillo Copper, ½ to 1; Kapunda, 5-16 to 7-16; Yudanmutana, ½ to 1½; Scottish Australian, 1½ to 1½. In British Mines, West Chiverton shares have risen to 66½, 67½; the mine is looking well. Chiverton shares are about 5; Chiverton Moors are very firm, at 5½ to 5½. Prince of Wales shares have risen to 53½, 55½; there are several points of improvement in the mine. New Setons have risen, and are in demand at 67½ to 70; Carn Brea, 22 to 24, and enquired after; Great Laxey are firm, at 17½ to 18; Great Voss shares are steady, at 17 to 17½; Maes-y-safn, 27 to 28. Westminster (Limited), 5 to 5½; the prospects are reported of a very high order. Minera, 170 to 175.

At Redruth Ticketing, on Thursday, 2165 tons of ore were sold, realising 10,067*l.* 6*s.* The particulars of the sale were:—Average standard, 105*l.* 3*s.*; average produce, 7; average price per ton, 4*l.* 13*s.*; quantity of fine copper, 152 tons 7 cwt. The following are the particulars of the sales during the past month:—

Dec. 5..... 3390 ..... 112 16 0 ..... 6 4 0 ..... 13 11 0 ..... 69 12 0

Dec. 12..... 1889 ..... 113 16 0 ..... 6 4 0 ..... 13 11 0 ..... 69 12 0

Dec. 19..... 3852 ..... 117 16 0 ..... 6 4 0 ..... 13 11 0 ..... 69 12 0

Dec. 26..... 1835 ..... 104 2 0 ..... 7 4 0 ..... 13 11 0 ..... 69 12 0

Jan. 2..... 2165 ..... 105 3 0 ..... 7 4 0 ..... 13 11 0 ..... 69 12 0

Compared with last week's sale, the decline has been in the standard 2*l.*, and in the price per ton of ore about 3*s.* Compared with the corresponding sale of last month, there has been about a corresponding decline.

**IRISH MINE SHARE MARKET.**—New Year's day has been kept a close holiday here, which, together with its attendant preparations for social enjoyments, has greatly interfered with business of every description on our Stock Exchange. But there is some hope that on returning activity our mining shares, at least, will be looked up with increased attention, and that quotations of them will improve accordingly. In anticipation of a 10 per cent. dividend (since declared by the company) the Mining Company of Ireland shares, which we last week quoted at 16*l.* 10*s.* sellers, have been dealt in at 16*l.* 15*s.* for cash and 17*l.* for the end of this month, thus establishing an advance for the week of from 10*s.* to 15*s.* per share (7*l.* paid). Wicklow Coppers, on which the customary payment of a dividend is not so close at hand, have been dull, but the few which could be procured at a reduction on last quotation were quickly taken, transactions having thus been effected at 16*l.* 12*s.* 6*d.* to 16*l.* 15*s.* (2*l.* 10*s.* paid). Connors are freely offered for sale at 5*s.* 6*d.* In other mines there were scarcely any enquiries.

The Mining Company of Ireland held a half-yearly meeting of shareholders on Thursday last. We intend giving a fuller report of their proceedings in our next Journal, stating for to-day only the fact most interesting to the mining public at large, that, from the detailed statement by the directors, it clearly appears that the company's property in copper, lead, and coal mines is in as prosperous a condition as at any former period, excepting only so far as the value of their produce is affected by the depression of the metal market. It is, therefore, a subject for congratulation that in the face of such a difficulty the company has been able to realise a net profit for the half-year ended on November 30 last of 7863*l.* 16*s.* 5*d.*, which has enabled the company to declare a dividend at the rate of 10 per cent. per annum. Many of our readers will hear with great interest what the Chairman (Mr. Thomas Bewley) said to the meeting in reference to the Chilean supply of copper ores. In the course of his explanatory address he stated:—"We heard a great deal about the Australian mines, but they are out of court now. In the same way, about the Cape of Good Hope copper mines, but they are very much

in the same condition, and the imports from them are falling off. And Chili, from which five-sixths of all the copper produced in the world comes, has experienced a depression. One of the mines worked by a wealthy English company" . . . has, according to their last report, realised a loss of 25,000*l.* upon a produce of 5000 tons of metallic copper for the respective 12 months. "The consequence of that is, I think, that production in those mines must fall off, and that consumption being as great, if not greater than ever, an advancing price must result."

At the Hington Down Consols Mine meeting, on Dec. 27 (the Rev. C. J. Fynes-Clinion in the chair), the accounts showed a cash balance in hand of 566*l.* 0*s.* 4*d.*. The report of Capt. T. Richards stated that the cost for the ensuing four months was estimated at 640*l.* per month, and the net sale of ore would be about 340 tons.

At West Godolphin Mine meeting, on Tuesday (Mr. W. C. Vivian in the chair), the account showed a balance of assets over liabilities of 613*l.* 2*s.* 8*d.* A dividend of 250*l.* (2*s.* per share) was declared.

At Great South Tolgus Mine meeting (Mr. W. A. Thomas in the chair), the accounts showed a balance in favour of company of 252*l.* 2*s.* 2*d.*; the liabilities amounted to 786*l.* 17*s.* 7*d.*, and the assets to 1846*l.* 17*s.* 7*d.*. Of the 547 shares forfeited at the special general meeting, but ordered to be restored at the last general meeting on payment of the calls, 435 had been paid upon, leaving a balance of 112, which were absolutely forfeited. The application for the restoration of certain other forfeited shares was not entertained. A letter from Mr. Francis Pryor was read, when it was resolved that the suggestion therein made—that the forfeited and relinquished shares be allowed to merge into the company—be not allowed, as much inconvenience might arise therefrom, and that, inasmuch as Capt. Daw signified his intention to prosecute the mine with proper vigour, it is only necessary to request him to continue operations, without unduly extracting the ore. The report referred to the fact that the discovery in the 140, west of Noel's, will make up for the falling off in the 140 east. Capt. Daw considered the mine to be looking satisfactory, and he thought the returns would about meet the cost.

At East Carn Brea Mine meeting (Mr. W. A. Thomas in the chair), the accounts showed a balance in hand of the treasurer of 428*l.* 7*s.* 8*d.*. The report stated that the lodes at the greater number of the points of operation are very promising, and, judging from the run of ore ground passed through in the 80 fathom level, west of Thomas's engine-shaft, as also the improvement of the lode in the shaft, Capt. Isaac Richards has no doubt that they will meet with good discoveries at deeper levels. The permanent pitwork having been placed in Thomas's engine-shaft, they are now able, although the water has considerably increased, to keep in fork without the assistance of the old engine two-thirds of the time. They hoped to sample, during the next two months, 360 tons of copper ore, and the cost for that period will be about 800*l.* per month. During the discussion which took place upon the position and prospects of the mine, an opinion was expressed to the effect that, as two large cross-courses traversed the set, and that there were eight known lodes, some good discoveries would soon be made.

At the Llanberis Slate Company annual general meeting, on Tuesday (Mr. H. Haymen in the chair), the directors' report was adopted. Details will be found in another column.

On the Stock Exchange there has been a moderate demand for Mining Shares during the week. The following prices were officially recorded in British Mining Shares:—Grenville, 1 15-16th; Prince of Wales, 2½; Great Laxey, 77½; Great Wheel Voss, 17½; Tincroft, 13½. In Colonial Mining Shares the prices were:—Port Phillip, 1 7-16th to 1½; Scottish Australian, 1. In Foreign Mining Shares the prices were:—St. John del Rey, 58, 58½, 57½, 57; Don Pedro, 3, 2 15-16ths, 2½ prem.; Chontales, 3½, 3½, 3½; Frontino and Bolivia, 13-16ths; Rossa Grande, 9-16ths; Pestarena, 2½, 2 9-16ths.

**WEST CHIVERTON.**—This valuable property continues to improve as its development progresses. The present value of the 110 and west is 90*l.* per fm., and the 110 east (north part) 25*l.* In the 110 west no lode has been taken down for 4 fms., and the communication with Burgess's shaft, which will shortly be made, will lay open a splendid piece of lead ground. The 100 end, west of No. 1 winze, has considerably improved, being at present worth 25*l.* per fm.; this is opening out an important piece of new ground. The ends upon the north lode are worth something like 100*l.* per fm. On Dec. 5, 140 tons of ore were sold, which realised nearly 2000*l.*; and on Dec. 30, 165 tons (computed), of the value of about 2200*l.*

**THE PROSPECTS OF THE COPPER TRADE.**—Messrs. JAMES LEWIS and SON (Liverpool, Jan. 1), write—Looking to the future, should the present excessive importation of bar of direct copper continue, the only hope of any material revival in the value of copper produce depends upon a falling off in its production. This at present appears very probable, owing to the low prices that have now been ruling for so long a period; and although the same argument was used this time last year, and the expected result has so far not followed, yet it must be remembered that mines "die hard," and that it takes a long time for production to be stopped, although the mines may be working to a loss, as the existence of many depends upon their being kept constantly working, while others are on foot for no other reason.

This result is already showing itself in the case of three of the largest mines, situated in different countries. The Panulillo Mine, of which it was said at the late meeting of the company that few mines in the world can work at so low a cost, and that it produced one-ninth of the Chilean yield of copper, has been working to a heavy loss, and consequently orders have gone out to Chili to consider the advisability of curtailing its operations. The Cape Copper Mine, which raises ore to the extent of 1200 tons of fine copper per annum, of a higher produce than any other known mine, and by the inexpensive process of quarrying, likewise shows a large amount to the debit, and it is supposed to confine the production to only the richest and most easily obtained ore, until prices mend. The Union Mine, of California, again, has during the past year exported less than 9000 tons of ore against nearly 25,000 tons in 1865, a falling off entirely attributable to low prices. These three instances will suffice to show that the value of copper must have fallen below the cost of production, as they may be taken as samples of most other mines, with but a few exceptions.

**REVIEW OF THE DUTCH TIN TRADE FOR 1867.**—After mentioning the result of the want of confidence in commercial circles, and other circumstances which unfavourably influenced the tin trade in Holland during the past year, Messrs. Jan Houten (Rotterdam, Dec. 31) write—Regarding the future, however, the prospects are much more cheerful. The exports from Java show a great falling off, being for the first nine months of 1867 only 49,972 piculs, or 20,010 piculs (2425 tons) less than in the corresponding period of 1866. The unsold stock for the next sale to-day is only 35,568 piculs, and the quantity actually afloat only 8500 piculs, or about 17,000 piculs, so that there is every probability for a small spring sale, and when money continues abundant at low rates, and confidence is restored in all quarters, a better demand for tin is generally expected, especially as the present prices are very moderate.

**THE PROSPECTS OF THE TIN TRADE.**—In referring to this subject, Messrs. VON DAELSEN and NORTH remark that they can see nothing in the position of the article, so far as statistics are concerned, to lead them to lose confidence; and if they compare its position with what it was at the beginning of the year, there is cause to be hopeful; nor do they at all look for increased supply, unless (which they much doubt) the reported Japanese stock interferes. The weak spot now is the anxiety of holders to realise, at a time when buyers are very cautious, and the extreme flatness of the tin-plate trade, which, unless an improvement soon takes place, must interfere materially with the consumption of tin. This may occur sooner than many expect, and upon it, most probably, hinges the immediate future of the tin market.

**THE FUTURE OF THE TIN TRADE.**—Messrs. SARGANT and SON (Jan. 2) write—We have before us the probability of supplies fully as large as last year's, without taking into account indirect channels, but as last year's were not sufficient without trenching upon stock, so we should judge there is not likely to be any material increase in stocks during the present year. We hope, although no symptoms are yet apparent, that confidence may gradually return, and that the trade is stimulated by the increase in the abundance of capital, and the low prices of most leading staples of commerce. Tin is in a good position from its low price, and would doubtless share in any improvement and general revival of confidence.

**THE FUTURE OF THE SCOTCH IRON TRADE.**—After mentioning how nearly their anticipations for 1867 were borne out, Messrs. WOODROW and SON (Glasgow, Jan. 1) write—During the past year our shipbuilders have had their yards but barely supplied with work. Now there is every indication of great activity, the amount of tonnage already on hand being nearly double what it was a year ago; hence we infer that with so decided an improvement already inaugurated in this important department of the iron trade, on which all the other branches are more or less dependent, the time is not far distant when each district will find full employment for its produce.

**CAUTION.—WHEREAS, LETTERS PATENT**, under the Great Seal of the United Kingdom, for IMPROVEMENTS IN TREATING ORES, numbered and dated as follows:—No. 2517, dated 30th September, 1857; No. 883, dated 8th April, 1859; No. 2900, dated 20th December, 1859; No. 2525, dated 17th October, 1860—were respectively GRANTED to WILLIAM HENDERSON, of GLASGOW. Now, Notice is hereby given that IMMEDIATE LEGAL PROCEEDINGS will be TAKEN against ANY PARTIES FOUND INFRINGING THE SAID PATENTS, or either of them.

BOTHAMLEYS and FREEMAN, 39, Coleman-street, London, E.C.  
(Solicitors to the said William Henderson.)  
Dated this 27th day of November, 1867.

**A GENTLEMAN**, thoroughly conversant with Mining Operations and the general management and development of Mineral Properties, &c., DESIRES AN APPOINTMENT AS CONFIDENTIAL RESIDENT AND MANAGING AGENT. Would collect the rents and keep the general accounts of an extensive estate, and otherwise render his practical experience advantageous to a landed proprietor requiring confidential, trustworthy aid in the management and development of his property. The highest certificates and references of ability and energy, moral integrity, &c., &c.  
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**TO MERCHANTS, ACCOUNTANTS, AND OTHERS.**  
**WANTED**, by the ADVERTISER, a SITUATION as CLERK. Well qualified, and can be highly recommended. Salary expected very moderate. Age 26 years.—Apply to "Trebo," Post Office, Neath.

## SLATE QUARRY INSPECTION.

**A QUARRY MANAGER**, who is also an Engineer, skilled in the geology of slate rock, is now READY TO INSPECT and REPORT upon any SLATE PROPERTY in the UNITED KINGDOM or ABROAD. To capitalists who wish to embark in slate quarry enterprise the advertiser can give the most reliable advice and assistance. Address, in the first place, to "Quarry Manager," 26, Fleet-street, London, E.C.

## GLAMORGANSHIRE, SOUTH WALES.

**TO CAPITALISTS.—WANTED**, a PARTNER, who can command from £3000 to £4000, to TAKE a SHARE in a HOUSE COAL COLLIERY, now nearly ready to send into the market 50 tons per day, and will shortly be able to increase that quantity to 100 tons per day. The colliery is within half an hour's transit from the best shipping port in South Wales. Further particulars can be obtained by application to Mr. L. A. WILLIAMS, Mining Engineer, &c., Sydney Villa, Canton, Cardiff.

**TO CAPITALISTS.—WANTED TO SELL, ONE-HALF of a PATENTED INVENTION FOR PUDDLING BY MACHINERY.** A capitalist, commanding £10,000, will find this a safe and profitable investment. The terms proposed will indemnify the purchaser, as the capital is not required to carry out the patent, but for manufacturing purposes. For particulars, apply to Mr. B. BAYLISS, Cwmbran, near Newport, Monmouthshire.

**WANTED**, at a Colliery in North Wales, an EFFICIENT PERSON who would INVEST a SMALL AMOUNT of CAPITAL, and UNDERTAKE the ENTIRE MANAGEMENT, the proprietors having other business engagements to attend to. The lease includes about 30 acres of freehold, and the present output from drivings alone is about 300 tons per day. Five measures have been sunk through of an aggregate thickness of 31 ft., of a depth of 160 yards, and others have been proved. Complete railway communication to all parts, and shipping ports on the River Dee. Address, "W. H. J.," MINING JOURNAL Office, 26, Fleet-street, London.

**WANTED**, a PERSON TO UNDERTAKE the MANAGEMENT of the GRANGE IRONWORKS, near DURHAM. He must have a thorough and practical knowledge of foundry work, the designing and erecting of engines for colliery purposes, estimating, taking out quantities, and keeping costs. Applications, with testimonials and salary required, to be addressed to the Directors of the Grange Iron Company (Limited), Durham, on or before the 23rd day of January, 1868.

## TO CAPITALISTS.

**WANTED**, a LOAN at 4½ per cent., the sum of SIXTEEN THOUSAND POUNDS on a FREEHOLD COLLIERY and IRONSTONE PROPERTY, in FULL WORK, in NORTH STAFFORDSHIRE, of AMPLÉ VALUE. None but principals or their solicitors treated with. Address, "P. Z.," Commercial Sale Rooms, Mincing-lane, E.C.

**WANTED**, FOUR THOUSAND POUNDS, upon SECURITY of an EXCELLENT COLONIAL COLLIERY. Apply, with real name and address, to J. H. HOWARD, Esq., solicitor, 9, Quality-court, Chancery-lane.

Date.	Mines.	Tons.	Amount.	Purchasers.
Dec. 27—	Bwlch Consols	50	£13 15 0	—
	Bwadrain Consols	45	11 13 0	—
28—	Plynlimmon	40	11 11 6	Burry Port Company.
30—	East Logylas	60	11 5 6	Walker, Parker, & Co.
	Glogfach	55	15 9 6	Stock and Company.
	Cwmystwith	70	11 12 6	Panther Lead Co.
31—	Bronllyd United	55	12 0 0	ditto
	Clara United	25	11 11 6	Burry Port Company.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Dec. 28—	Great Laxey	300	£ 3 17 0	S. Kenrick & Son.
31—	Stiperstones	50	4 11 8	Vivian and Sons.

Date.	Mines.	Ts. c. q. lbs.	Price p. ton.	Amount.	Purchasers.
Dec. 31—	West Godolphin	7 14 3	26 ..	£57 0 0 ..	£441 11 0—Boltho.

Date.	Mine.	Cwts.	Price per ton.	Purchasers.
Dec. 31—	Isle of Man Mining Co.	3½	£409 6 0	Vivian and Sons.
Jan. 2—	ditto	1½	27 14 0	ditto

## COPPER ORES.

Sold at LIVERPOOL, from Dec. 19 to Dec. 31.

Messrs. Turnbull and Watson (Dec. 31) write—Since last report prices have given way 20*s.* to 30*s.* per ton, owing to advices from Chili of heavy charters, representing for the fortnight 2700 tons fine copper: 200 tons bars sold to arrive at 6*l.*, about 520 tons for distant arrival on private terms, 205 tons on spot here at 6*l.*, with 155 tons ingots at 7*l.* On Dec. 24, by tender at Swansea, 3108 tons ores, including a cargo of Chilean regulus, at an average of 14*s.* 1*d.* per unit, against 1*s.* 5*d.*, the average of the preceding sale, on Nov. 30; and to-day by tender here 885 tons Chilean ores, at an average of 13*s.* 10*d.* per unit. Stocks of copper produce (Chilian and Bolivian) are as follows:—

Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	3277	1782	4248	817
Swansea	1977	50	100	833
Harve	—	—	3780	430
Total	5254	1832	8228	2080

Equal to 12,000 tons in fine copper.

Sales since our last have been as follows:—	Mine or ship.	Tons.	Price.	Mine or ship.	Tons.	Price.
Bars—Serenia	203	£69 0 0	Bars—Copolago	270	..	private
" Egbert	205	68 0 0	" Powhattan	250	..	terms.
" 8-second hand	50	68 0 0	Ore—Hen, Theodore	180	£ 2 0 13 10	
Ing.—Urmeta	30	74 0 0	" Quinteros	275	..	0 13 10
" Urmeta	125	73 0 0	" Alice	450	..	0 13 10
Ore & Reg., Swansea	3108	0 14 1				

Arrivals of copper produce from the West Coast (South America) during the past fortnight:—Santiago, from Valparaiso, 60 tons bars; Victoria, from Valparaiso, 100 tons bars; Pathfinder, from Caldera, 470 tons regulus.—At Swansea, Star of the West, 400 tons ingots; Carmelita, from Tocopilla, 890 tons ores.

## COPPER ORES.

Sampled Dec. 11, and sold at Tabb's Hotel, Redruth, Jan. 2.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Clifford Amalgamated	666	£376 12 0	South Wheel Frances	50	£26 18 6
ditto	83	5 15 6	East Pool	28	2 10 6
ditto	80	4 6 0	ditto	28	2 12 0
ditto	78	4 4 6	ditto	27	2 9 6
ditto	71	6 6 6	ditto	15	3 14 6
ditto	72	5 17 0	Wheel Basset	46	5 3 6
ditto	68	4 4 6	ditto	33	8 7 0
ditto	42	3 18 6	ditto	30	3 2 6
ditto	23	2 19 6	South Wheel Crofty	31	2 1 0
ditto	46	5 15 6	ditto	44	2 1 0
West Wheel Seton	94	2 16 0	Carn Camborne	58	2 9 0



## WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,  
MINING AGENTS, STOCK AND SHARE DEALERS, &c.  
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSRS. WATSON BROTHERS beg to notify to their friends and the public generally that Mr. W. H. CUELL has retired from the firm, in accordance with a clause in the deed of partnership; and having sold to the remaining partners all his right, property, and interest in the business hitherto carried on by J. Y. WATSON, F.G.S., NAPOLEON FREDERICK WATSON, and himself, under the name of "WATSON and CUELL," the same will be carried on in future by Mr. J. Y. WATSON and Mr. N. F. WATSON, under the designation of "WATSON BROTHERS," and they take this opportunity to return their most sincere thanks for the great patronage bestowed and confidence reposed in the firm for 24 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuance of both.

Messrs. WATSON BROTHERS have made arrangements for continuing their weekly Circular, which has had a large circulation for many years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and state of the share market, will in future appear in this column. In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1848, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON BROTHERS transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON BROTHERS also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON BROTHERS are also daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON BROTHERS having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

Devon Great Consols has sold this year 20,067 tons of copper ore, for 94,510*l.*, and divided 39,366*l.*, or 39*l.* per share. The mine looks well, has about 300,000*l.* of reserves, and bids fair to pay the same, if not increased, dividends, for years to come. At 400*l.* the mine pays near 10 per cent.—West Chiverton is our richest lead mine, and has sold this year 3932 tons of lead, for 58,205*l.*, and paid in dividends 24,000*l.*, or 8*l.* per share. The reserves are large, and large quantities of productive ground are being laid open every month. At 68*l.* the mine pays about 12 per cent., at the present rate of dividends, but there is reason to expect an increased quarterly dividend.

PRINCE OF WALES.—The bottom level (the 55) has gone over a course of ore 50 fathoms in length, and the ends are approaching points where improvements may be looked for. Some places in this level have been richer than anything seen in the 45 fathom level, but the average value has not been so great. No one can say positively how the lode will be cut in the 65 (in January), but appearances at present warrant the expectation of its being cut equally good as in the 55, and if it be so, it will establish the mine, and there will, probably, be a considerable rise in the price of shares. The costs of putting up the new drawing engine have been, and are still, heavy, and for a time will affect the profits; but the agent promises, eventually, to pay for the engine and cost of erection out of the halve on the mine. The mine has sold this year 1213 tons of ore, for 8751*l.*, 11*l.* 7*d.*, and paid in dividends 2219*l.*, or 3*l.* 6*d.* per share, and altogether looks promising for one of the most successful mines of 1868.

WEST PRINCE OF WALES, during the year, has had all its machinery erected and paid for, and is now in full course of operation on the same lode as Prince of Wales, and we look for the same results. It is a good speculation in the Prospective List, with a view of a call for many months.

WEST DRAKE WALES—bordering Prince of Wales to the east, as West Prince of Wales does to the west—is a fine speculation at a low price. Here the lode has been cut, and the machinery erected to work it.

WEST WHEAL FRANCES is one of the most promising progressive mines, and but for the price of tin would have paid dividends years ago, when shares were at 40*l.*; at present the mine is about paying cost. In the engine-shaft they are approaching a very important point; it is now sunk about 8 fms. below the 108 fm. level, and in 3 or 4 fms. more sinking the south lode will form a junction with the engine lode. This south lode is the one which has been so rich in the adjoining mine, West Basset, and although so far in West Frances it has been poor, yet the junction of two master lodes like these cannot, it is thought, fail to produce good results. On the engine lode a large amount of average quality tin ground is being laid open, which can be advantageously worked at the present price of tin.

SATURDAY, DEC. 28.—Market still quiet. Great North Laxey shares in chief demand. Great Laxey, Chiverton, and West Chiverton also dealt in. West Chiverton, 66 to 68; Wheal Chiverton, 5*l.* 5*d.* to 5*l.* 8*d.*; Great Laxey, 17 to 18; Great North Laxey, 12*l.* 6*d.* to 13*l.*; Chontales, 3*l.* 3*d.* to 3*l.* 5*d.*; Chiverton Moor, 5*l.* 5*d.* to 5*l.* 8*d.*.

MONDAY.—Settling-day: still a fair amount of business doing. Grenville shares advanced to 27*l.* 6*d.*, 30*l.*; Chiverton Moor, 5*l.* 5*d.* to 5*l.* 8*d.*; Chontales Gold, 3*l.* 3*d.* to 3*l.* 5*d.*; West Chiverton, 66 to 68; East Gwennake, 3*l.* 3*d.* to 4*l.*.

TUESDAY.—Market quiet. Prince of Wales shares in good demand, and at an advance. Chiverton and West Chiverton shares also in demand. West Chiverton, 66 to 68; Wheal Chiverton, 5*l.* 5*d.* to 5*l.* 8*d.*; Chiverton Moor, 5*l.* 5*d.* to 5*l.* 8*d.*; Great North Laxey, 12*l.* 6*d.* to 13*l.*; Wheal Chiverton, 8*l.* 2*d.* to 8*l.* 5*d.*; Prince of Wales, 49*l.* to 50*l.*.

WEDNESDAY, being New Year's day, was a holiday in the Stock and Mining Exchanges.

THURSDAY.—Market better. Prince of Wales advanced to 52*l.* 6*d.*. Chiverton Moor, West Chiverton, West Prince of Wales, North Treskerry, Carn Brea, East Grenville, Great South Tolgus, Clifford, and North Croft in active demand, at better prices. Chiverton Moor, 5*l.* 5*d.* to 5*l.* 8*d.*; Chontales, 3*l.* 3*d.* to 3*l.* 5*d.*; Great South Tolgus, 22*l.* to 24*l.*; West Chiverton, 66 to 68; West Prince of Wales, 9*l.* to 10*l.*; Wheal Grenville, 27*l.* to 29*l.*.

FRIDAY.—Market pretty active. Prince of Wales shares firm, at 52*l.* buyers. West Chiverton, Chiverton Moor, South Frances, Carn Brea, Great Laxey, and East Gwennake in demand. West Chiverton, 66 to 68; Scton, 80 to 85; Marke Valley, 6 to 7*l.*; Great Laxey, 17*l.* to 18*l.*; East Grenville, 17*l.* to 20*l.*; Carn Brea, 23 to 25.

Just published, price 2*s.* 6*d.*.

## JOINT-STOCK COMPANIES: HOW TO FORM THEM.

BEING A PRACTICAL GUIDE FOR PROJECTORS, PROMOTERS, DIRECTORS, SHAREHOLDERS, CREDITORS, SOLICITORS, SECRETARIES, AND OTHER OFFICERS.

By THOMAS TAPPING, Esq., of the Middle Temple, Barrister-at-law.

This book contains a popular exposition of the law relating to public companies as it at present stands, and is written in a style readily intelligible to non-professional persons. Legal technicalities have been, as far as practicable, avoided, and the information given has been so arranged as to present itself in the order in which it will be required by those concerned.

LONDON: MINING JOURNAL Office, 26, Fleet-street.

Now in the Press, price 5*s.*

## STATISTICS OF THE MINES OF CORNWALL AND DEVON, WITH OBSERVATIONS UPON THEM.

By THOMAS SPARGO, STOCK AND SHAREDEALER, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

I beg to inform the mining interest that my work, under the above title, will be issued at the end of this month. It will contain the following particulars:—viz., the geological position, present prospects, names of purser, manager, and secretary, with statement of the annual returns of each mine during the last two years, and of total dividends paid to the present time. The work will be illustrated by a map of Cornwall and Devonshire; geological district maps, divided into eight sections, in which will be shown the boundary lines of each parish, height of hills, sources of rivers, &c.; maps of St. Just, St. Ives, Marazion, Helston, Gwinnar, Chiverton, Bodmin, Liskeard, Devon Great Consols, Ashburton, and Exmouth mining districts, showing boundary lines of each property, with the lodes, &c., traversing them.

It will also contain transverse and longitudinal sections of Dolcoath Mine (kindly supplied by Captain Charles Thomas); section of workings in Botallack Mine (supplied by the manager, S. H. James, Esq.); longitudinal sections of workings upon the main lode in Great Wheal Vor and Tresavean Mines; geological map of the Fowey district (supplied by Major Davis, R.M.); historical account of the Devon Great Consols, and of all the principal mines in the two counties.

## THE GOLD MINES OF NOVA SCOTIA.

UNDER OFFICIAL PATRONAGE.

Now in the press, and will be issued early in December.

## A POPULAR GUIDE, OR HANDBOOK, FOR TOURISTS, MINERS, AND INVESTORS, INTERESTED IN THE GOLD MINES OF NOVA SCOTIA.

By A. HEATHERINGTON.

Author of "Cosmopolite's Statistical Reviews," &c., &c.

Copies can be had at the MINING JOURNAL Office, 26, Fleet-street, London.

## ROBERT LIBBY AND SON, MINE AND SHAREDEALERS, &amp;c., CAMBORNE, CORNWALL.

## Notices to Correspondents.

\* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accumulating useful work of reference.

CHLORIDE OF MAGNESIUM.—Can anyone inform me where I can obtain this article in its "crude" state at a low price in large quantities?—A CONSTANT SUBSCRIBER FOR FIFTEEN YEARS.

BORING MACHINERY.—The most reliable boring machines yet proposed is probably that of Mr. Abegg; it was not intended to bore at the high speed promised by the inventor of the steam machines, but it facilitated hand labour.

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

## THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, JANUARY 4, 1868.

During the quarter ending Dec. 31 the quantity of copper ore, the produce of Cornwall and Devonshire, sold at the Cornish Ticketing, was 30,981 tons, which contained 2058 tons 3 cwt. of fine copper, and realised 142,140*l.* 6*s.* 6*d.*, being equal to an average of 4*l.* 11*s.* 9*d.* per ton of ore, and 69*l.* 1*s.* 6*d.* per ton of copper in the ore. During the same period the British, colonial, and foreign ores sold at Swansea, amounted to 10532 tons, which contained 2083 tons 9*l.* cwt. of fine copper, and realised 148,827*l.* 12*s.* 6*d.*, being equal to an average of 14*l.* 2*s.* 7*d.* per ton of ore, and 71*l.* 8*s.* 6*d.* per ton of copper in the ore. The average produce of the ore sold at the Cornwall Ticketing was 6*l.* 9*s.* 6*d.*, whilst that sold at Swansea gave an average produce of about 19*l.* per cent. From this it will be seen that the aggregate sales by ticket were 41,513 tons of ore, containing 4141 tons 12*l.* cwt. of fine copper, and realising 290,967*l.* 19*s.* The subjoined is a summary of the periodical sales at the Cornwall and Swansea Ticketings respectively. The ore sold at the Cornish Ticketings was—

Date.	Stand.	Prod.	Price.	Per unit.	Tons ore.	Fine cop.	Amount.
Oct. 3.	110	3	.. 6 <i>l.</i> 0	.. 13 <i>s.</i> 6 <i>d.</i>	3200	.. 205	19 .. 11 0
.. 10.	111	19	.. 6 <i>l.</i> 0	.. 13	8	.. 1737	.. 109 13 .. 7,497 18 6
.. 17.	115	5	.. 6 <i>l.</i> 0	.. 14	1 <i>l.</i> 1/2	.. 3710	.. 228 19 .. 16,183 14 0
.. 24.	102	0	.. 8 <i>l.</i> 4	.. 5	18	0	.. 13 11 .. 1498 .. 126 17 .. 8,818 11 0
.. 31.	101	9	.. 8	.. 5	7	0	.. 13 4 .. 2073 .. 165 15 .. 11,110 4 6
Nov. 7.	110	8	.. 6 <i>l.</i> 0	.. 4	0	6	.. 12 9 .. 1541 .. 94 12 .. 6,208 6 6
.. 21.	113	8	.. 6 <i>l.</i> 0	.. 4	8	6	.. 13 11 1/2 .. 4033 .. 254 15 .. 17,793 2 6
.. 28.	105	9	.. 7 <i>l.</i> 5	.. 5	6	6	.. 13 10 1/2 .. 2218 .. 168 19 .. 11,719 18 0
Dec. 5.	112	1	.. 6 <i>l.</i> 4	.. 4	6	0	.. 13 8 .. 3395 .. 213 18 .. 14,634 2 6
.. 12.	113	16	.. 6 <i>l.</i> 4	.. 4	7	0	.. 13 11 .. 1889 .. 117 11 .. 8,181 12 6
.. 19.	117	16	.. 5 <i>l.</i> 4	.. 4	3	0	.. 14 3 .. 3852 .. 226 3 .. 16,046 4 0
.. 26.	104	2	.. 7 <i>l.</i> 5	.. 5	9	6	.. 13 10 1/2 .. 1835 .. 145 2 .. 10,056 1 6

Total for the quarter	30,981	.. 2058	3	.. 142,140	6 6
Quarter ending September, 1867	29,410	.. 2008	14	.. 137,216	19 0
Quarter ending June, 1867	30,298	.. 1992	9	.. 140,078	11 0
Quarter ending March, 1867	29,077	.. 1968	6	.. 138,295	11 6
Total for the year	119,766	.. 8027	12	.. 557,731	8 0
Showing a quarterly average of	29,941	.. 2006	18	.. 139,432	17 0
Corresponding quarter, Dec. 1866	32,183	.. 2185	3	.. 135,973	6 6
Total for the year 1866	137,121	.. 8716	17	.. 582,564	10 6

The ore sold at the Swansea Ticketing was—

Date.	Stand.	Prod.	Price.	Per unit.	Tons ore.	Fine cop.	Amount.
Oct. 1.	493	9	0	.. 17 <i>l.</i> 5	.. 14	4	.. 125 5 .. 218 1 .. 15,632 5 6
.. 15.	92	10	0	.. 21 <i>l.</i> 1/2	.. 15	3	.. 14 3 .. 1990 .. 422 17 1/2 .. 30,181 13 0
.. 29.	92	8	0	.. 21 <i>l.</i> 1/2	.. 15	2	.. 14 3 .. 2343 .. 497 18 .. 35,472 0 6
Nov. 26.	93	11	6	.. 19 <i>l.</i> 1/2	.. 14	1	.. 14 5 .. 1836 .. 358 0 .. 25,850 5 6
Dec. 24.	92	11	6	.. 18 <i>l.</i> 1/2	.. 13	8	3 .. 14 2 1/2 .. 3198 .. 586 13 .. 41,691 8 0

Total for the quarter	10,532	.. 2083	9 1/2	.. 148,827	12 6
Quarter ending September, 1867	8,881	.. 1202	0	.. 86,033	8 6
Quarter ending June, 1867	2,220	.. 225	10	.. 21,508	7 0
Quarter ending March, 1867	3,914	.. 587	2	.. 43,817	5 6
Total for the year	25,547	.. 4098	1 1/2	.. 300,286	13 6
Showing a quarterly average of	6,387	.. 1024	10	.. 75,071	13 4
Corresponding quarter, Dec. 1866	5,172	.. 681	13	.. 47,757	11 6
Total for the year 1866	36,148	.. 5203	18	.. 383,899	17 6

## REVIEW OF THE SOUTH YORKSHIRE IRON AND COAL TRADES.

In noticing the condition of the Iron and Coal Trades of South Yorkshire for the year just closed, it may be said, although the former has been in a very unsettled state, still, taken altogether, it will bear favourable comparison with almost any other iron-making locality in the kingdom. Singularly enough, the last year was ushered in by notice of a reduction of wages at the principal establishments, and it closes in the same way. A large number of men are at present unemployed, owing to the proposed reduction of 10 per cent. on late prices not being at once accepted. During the year the number of furnaces in blast have been increased, and the output of pig has been rather large, considering the limited demand there has been for manufactured iron. The same may be said with regard to the works on the Trent, and which are intimately connected with those of South Yorkshire. From them a large quantity of ironstone is imported for admixture with the native material, the combination producing a very fine quality of iron. The cold-blast furnace of the Worsborough Iron Company, which was blown out in the early part of the year, has not, so far, been lighted. The iron made there was of a superior quality, and the greater part of it was used in the manufacture of the heavy armour-plates for which Sheffield is now so famous. Now, however, after a long season of quietness, there is a good prospect of a large demand for plates, of a thickness hitherto unknown, it is just likely the furnace will be once more in operation before long, especially as there is a very large stock of stone on the ground. In manufacturing iron there has been a good deal of fluctuation, the make in the early part of the year being very moderate, but in the second quarter there was a considerable improvement. Some very large orders for railway bridges and girders, principally for East Indian lines, found their way into the district during the summer, whilst the makers of locomotives were also kept tolerably busy. At Milton and Elsecar the men struck against the "long weight," and after remaining out several weeks, accepted the terms. On resuming work, business became rather brisk, the plate and rail mills being kept well going up to a recent date, whilst there was a very fair demand for sheets and hoops, Russia being amongst the best customers, the trade with that country being only interrupted by the closing of the Baltic ports. In common with the other firms in the district, the puddlers, millmen, and others at the works named had notice on Nov. 30 that, in consequence of the continued reduction in the price of iron, wages would be reduced 10 per cent. So far, the works are closed, but it is expected that the terms will be accepted. In taking leave of the iron trade of 1867, any notice would be incomplete were allusion not made to the special enquiry into the workings of Trades Unions, and the terrible revelations which were made by the guilty parties. These things have all but passed away, but they have left our trades generally in a healthier state, giving more freedom to the workmen generally, so that the prospects of the future are more cheering than they have been. The efforts of the gentlemen who were instrumental in bringing to light the serious crimes of the Unionists, with a view to their prevention, have recently been substantially recognised by the manufacturers of Sheffield, who have presented Mr. JACKSON, the police superintendent, with 600*l.*, whilst something like the same amount has been subscribed for Mr. LONG, the talented editor of the *Sheffield Telegraph*.

The business done in coal has been very fair during the year, although at intervals there has been some inactivity, owing to the very quiet

state of the iron trade in Leeds and other places. The severe weather up to March caused the demand for house coal to be tolerably brisk, more especially for the London and southern markets. On the other hand, the trade done by the Manchester, Sheffield, and Lincolnshire Railway into the cotton districts of Lancashire has by no means been active, owing to the general depression causing many of the mills to work short time. The Great Northern Railway, during the year, carried a greatly increased tonnage, at times being at the head of all the companies carrying to the metropolis. In steam coal there has not been much more than an average trade to Hull in supplying the steamers running between that port and Russia and the North of Europe, whilst a good many cargoes were forwarded by sailing vessels to Riga, Frederickstadt, Nyobing, &c. To Grimsby business has been somewhat irregular, but taken altogether there has been an increase, the exports being to France, Russia, and Sweden. During the summer months there was only a limited business done by canal to Goole and Hull, and, in consequence, freights reached the lowest point they had ever done. During the last quarter of the year, however, matters changed for the better, there being a good demand for the eastern ports, and freights again rose. Taken altogether, the returns of the quantity of coal raised in the South Yorkshire district for the year 1867 are not likely to be greatly in excess of the previous year. The limitation of the hours of labour to eight per diem, the frequent disputes resulting in work being stopped, and the great power the men by association have obtained, have led to the output of coal remaining nearly stationary. This will be apparent when it is seen that the quantity of coal raised in Yorkshire for the year 1861 was 9,374,600 tons, which, notwithstanding the increase of our mining population, and the opening out of large collieries, has only increased in 1866 to 9,450,000 tons. Despite the dullness which has characterised the iron trade throughout the kingdom, there has been a very fair demand for coke. The ovens at Silkstone, belonging to the Frodingham Company, and being capable of producing more than 300 tons weekly, have been kept well going, and the same has been the case with most of the other makers.

During the year a good deal of interest was created by a series of experiments for the purpose of testing the relative value of the various safety-lamps in use. The experiments took place at the Barnsley Gasworks and at the Oaks Colliery, and clearly demonstrated the superiority of the STEPHENSON over all other lamps used in collieries. This was shortly after very forcibly illustrated by a sudden outburst of a large quantity of gas at the Strafford Main Silkstone Colliery, where the men were enabled to escape, the manager having taken the precaution to have "Geordie" lamps only in the pit. With any other lamps it is more than probable that a loss of life little short of what took place at the Oaks Colliery would have resulted. With regard to the last-named colliery, it is only within the last few days that any progress has been made in penetrating into the workings. Several months will, doubtless, elapse before the bodies are recovered and work again resumed. It is not, however, expected that anything of importance will be done until the new shaft is completed. Several new collieries have been opened out, and others are being sunk; and it is to be hoped that the quantity of coal raised in 1866 will be commensurate with the increased capital invested, and the additional number of persons finding constant and profitable employment in consequence.

## THE SCOTCH PIG-IRON TRADE OF 1867.

The Scotch Iron Trade, after enjoying a series of years of prosperity, experienced last year great depression, influenced by the clamorous demands of iron miners and workers in manufactured iron for high wages and reduction of hours of labour; and also by the general disorganisation of trade throughout the country, from the same unfortunate cause. The wages question, in the majority of instances, had to be settled in conformity with the demands of the operatives, trade became unprofitable, and, both at home and abroad, firms that in ordinary circumstances would have weathered the storm, had to give way, and distrust—to some extent unnecessary distrust—caused moneyed men to narrow their transactions with commercial and trading houses, till money has become so plentiful that it may be said to be almost at a discount. It is in the presence of circumstances like these that we present this annual report of the Scotch iron trade, from the most reliable sources.

From returns issued under the "authority of the Committee of the Glasgow Association of Iron Merchants and Brokers," we take the following summary of production, consumption, exports, and stocks:—

PRODUCTION.		Tons—1867.	1866.
From returns from all the makers, except the Carron Co.	1,002,000	.. 965,000	
Carron Company's make, estimated	29,000	.. 29,000	
Total	1,031,000	994,000	
Consumption in foundries		37,000 tons	
" in malleable works		264,073	.. 300,544
Total		186,190	.. 198,556
Exports—Foreign		420,262	499,500
" Coastwise		79,238 tons	
By rail to England		143,820 tons; 1866, 155,231 tons	
Total		338,364	.. 297,582
Increase		254,912	.. 288,351
Decrease		64,461	.. 50,567
Total		647,738	638,500
Stocks in Messrs. Connal's stores		209,140	.. 300,957
In North and Clyde Canal Company's stores		16,904	.. 29,952
At makers' works, from all except the Carron Company		161,556	.. 94,091
Carron Company's stock, estimated		85,000	.. 85,000
Total		473,000	510,000
Decrease		37,000 tons	

It is a noticeable fact, in connection with the production, that while last year the average number of furnaces in blast was only 108, they produced 37,000 tons more iron than 112 furnaces did in the previous year; or in other words, the production per furnace this



in the English and Welsh markets. Foreign shipments, on the contrary, have increased about 40,000 tons, the United States and British America alone contributing 30,000 tons towards this. Of the stocks, the returns speak for themselves.

**SHIPBUILDING.**—This important branch of local industry, which for the past two years has been much depressed, begins to show renewed vitality; enquiries are more numerous, and the number of vessels contracted for compares favourably with that of last year. There were built in 1867, 181 iron vessels of 97,500 tons, against 188 of 116,996 tons in 1866, and 229 of 146,700 tons in 1865; and there are now building 113, of 112,360 tons, against 84 of 70,000 tons in 1866, and 152 of 129,700 tons in 1865. Besides others, the keels of which have not been yet laid down.

With the exception of this latter branch of the iron trade, the immediate prospect of improvement is not well defined, and the feeling of employers in Scotland, we believe, is that, unless labour is reduced in price, and workmen become more considerate of economy in working, the present depression will become aggravated, and a dead-lock ensue. We hope our working men will be so considerate of the delicate state of matters that this latter alternative will be nobly averted.

#### IRONWORKERS' UNIONS, AND EMIGRATION.

The ironmasters of Staffordshire are much annoyed by the action of the men who lately carried on the North of England Ironworkers' Union having migrated to Walsall, where they are agitating to bring about one Union of ironworkers, comprising all the millmen, the furnacemen, and the puddlers throughout the United Kingdom. The project has led to several conferences, hitherto, however, without effect; and its revival is, probably, due to the non-success of the last effort to coerce the masters. It was put forth in the North, and failed signally. At that time there were two Unions—the one at Gateshead and the other at Brierley Hill. The strike was directed exclusively by the Northern Union, and it obtained only very partial support from the Southern. The failure virtually broke up the Northern Union, the president and secretary of which then removed into South Staffordshire. The Southern men will amalgamate only on condition of the one Union, having no paid president. Of course, these conditions are not suitable to the Northern officers; and the feud which sometime ago appeared is becoming more marked. Very harsh language is being used towards the officers of the Southern Union; and to stir up the workmen outrageous accusations are being brought against the masters. It is clear that the agitators experience difficulty in conjuring up a grievance. As they cannot excite discontent against the masters, they try to make the men uncomfortable at home, by endeavouring to promote emigration; and they propose to solicit the assistance of Mr. ELIHU BURRITT, the United States Consul in Birmingham, but this is not likely to prove successful. Emigration has been tried by the Southern Union, and large sums of money have been spent upon it, but the men are now convinced that they have paid too dearly for their whistle. Only a few men who went to New Zealand remain out; those sent to the United States have all returned. They came back when there was more employment in America than at this time.

The unfitness of these agitators for leaders is conclusively illustrated by their advocating so Utopian a project as emigration, especially to the United States. The workmen have no money of their own, nor Association funds to defray the cost even of their passage; and in so uninviting a condition are the United States at present, that 400 emigrants are returning to Europe every week, and yet leave 60,000 working men and women idle in New York alone, of whom 7000 are ironworkers, boiler makers, and the like. No ironworkers in Staffordshire will be induced by such delusions to interfere with employers, who, by their decision on Thursday, evinced a determination to enter the lists with competitors and contest for the market, even heavily weighted, rather than reduce wages. This view is confirmed by the circumstance that the meeting of the Millmen's Association was not attended by either the president, secretary, or any of the leading members, and that, therefore, they have not taken any part in passing these resolutions, which are to a very great extent contrary to the determination of millmen in general, and even contrary to the opinions of the Brierley Hill executive of puddlers. The millmen are determined not to amalgamate with the puddlers at all. At a meeting of millmen last week, this feeling was confirmed by formal resolution.

#### RAILS—IRON OR STEEL?

This question is now being well debated, which should give satisfaction to all concerned in the manufacture of either metal. The advocates of steel have received much support from the undoubted success of steel tyres and axles now being introduced on our leading railways. Steel for such uses is more enduring, and now even cheaper than the best quality of iron was formerly. But it remains to be proved that steel, price for price, is more economical for rails than really good coke iron, or charcoal and coke iron mixed.

Much has been written in the interests of the producers of steel rails, but until recently little has been said in favour of iron rails properly made. Ironmasters, who know that all rails are not of the "villanously" bad quality which competition and pecuniary exigencies have in some instances necessitated, should not hesitate to make these facts known, in the interests of themselves, of science, and of the general community. Much that has been said loses force through the interested character of the observations. It is, therefore, refreshing to have opinions of a purely disinterested authority. Such testimony is found in the joint report of Captain TYLER, Government Inspector of English Railways, and Mr. C. W. EBORALL, on the condition and prospects of the Grand Trunk Railway of Canada.

Captain TYLER, it appears, went to Canada upon the invitation of the directors of the company, who desired his views of their property, one extending over a distance of 1377 miles, but part of it a single line. The rails with which the Grand Trunk has been laid, whether from Wales or re-rolled in America, have proved very soft. The direct money loss to the company thereby in seven years Capt. TYLER estimates at 124,500*l.*, but the indirect loss he estimates at a far greater sum. He says—

"The difficulty of obtaining durable rails of iron has of late years been very generally felt, and has induced an outcry for steel rails in quarters where it would not otherwise have been heard. Much trouble has resulted, and much expense been incurred, for the want of rails of good quality in England, and still more in the United States and in Canada. The heavier rails laid down of late years in the United Kingdom have in some cases been outlasted by the lighter rails of previous years."

After showing that the defects in these rails in Canada and the United States had been sufficient to induce everyone concerned to desire a change of some description, and almost to create a panic as to the effect of the climate, he goes on to say:—

"But I have, after careful inspection and enquiry, become convinced that iron rails of appropriate form, of suitably and reasonably good quality and of sufficient hardness in the heads, may be made to last on most parts of the main line for 15 years, and on the average of the Grand Trunk Railway for very much more. There are, in fact, rails now in the track which have carried a heavy traffic for periods varying from 10 up to even 20 years in spite of every disadvantage. As I have already stated, their section was weak, their quality too often inferior, their joint-fastenings bad, the sleepers often further apart than at present, and the ballasting defective. Their durability has, under these adverse circumstances, been in some cases extraordinary. Good iron rails of stronger form, on sleepers 2 ft. to 2 ft. 6 in. apart, in good ballast, with well-fitted joints and well maintained, must give a still better result. The real question to be solved, as far as new rails are concerned, is how to obtain suitable material from the manufacturers. In the case of re-rolled rails, it is necessary to provide for the heads and iron which shall be sufficiently hard, and shall unite with that quality good welding to the remainder of the pile. I do not anticipate any difficulty in the latter case, when once the precise requirement is well understood. The best chance of procuring new rails of superior quality lies, probably, in insisting on a longer term of guarantee for rails supplied, in employing the most reliable manufacturers, and in paying a price commensurate with the value of the article. No manufacturer need have any fear of prolonging the guarantee to seven or even ten years, if he only furnishes suitable rail; and, in order that there may be no doubt as to what is required, I have caused a number of samples to be taken from various parts of the track and forwarded to England, showing in sections of fracture those qualities which have failed most completely, and those which have best withstood the climate and the traffic. Some of the Coalbrook Dale iron between Montreal and Lachine, which has been in the track for that period, will probably last five years longer."

Of this there is no doubt. We have now before our minds an instance in which, in this country, the best portion of an extensive system is that which was, upon its formation, 18 years ago, laid down with rails which could pass the muster of directors who were them-

selves ironmasters in the district through which the line ran. These rails have recently been taken up, fished, the ends cut, and again laid. They are in a condition, perhaps, superior to their state when they were first laid. The wear they were first subjected to gradually solidified the top, which is now altered from its original shape only in being slightly flatter. These are not the most expensive class of iron rails, but are of a quality which could now be produced much below the price at which large contracts are being now taken for steel rails. Other instances of the long wear of good iron rails might be given; but in these remarks our object is merely to stimulate the investigations now being made. The railway companies are proceeding cautiously in the matter. The North-Western Company are not producing steel rails so largely as formerly. The North British Company received tenders on Tuesday for rails, in which the proportions were 3000 tons of iron and 500 tons of steel; and next Monday the Great Northern will receive offers for 3600 tons of iron and 620 tons of steel rails. It may well be hoped that, with a view to demonstrate the relative value of iron and steel rails, these companies may be able to accept iron of a quality which shall make the comparison complete.

#### MORE ABOUT IRON AND COAL UPON THE CONTINENT.

Amongst the most valuable of the information likely to be forthcoming, relative to technical education in Great Britain, is that contained in "a letter to the Vice-President of the Committee of Council," from Mr. BERNHARD SAMUELSON, M.P. for Banbury, who, at the request of Government, went out to report upon the industrial progress of France, Switzerland, Germany, and Belgium, and on the methods adopted for the education of the industrial classes in those countries. The hon. gentleman says—

"There can be little doubt that the rapid progress of many trades abroad has been greatly facilitated by the superior technical knowledge of the directors of works everywhere, and by the comparatively advanced elementary instruction of the workers in some departments of industry; but, at the same time, it cannot justly be said that their superior education has led our neighbours to make any striking industrial improvements."

This is quite confirmatory of the views entertained by other authorities. Mr. HEWITT, the American ironmaster, whose report was noticed in last week's Journal, observed that the tools with which the French were working were close copies of English tools; and it is now being ascertained that the French locomotives, regarded as the closest copy of English engines, are unlike them only in respect of the inferior quality of portions of the workmanship—those which relate to the very important process of effectually securing joints. Mr. B. SAMUELSON says—

"In the production of iron and steel, if a step has been taken in advance of us as regards some peculiar though important products, this is due, except, perhaps, in the case of the steel castings of Bochum and Fribourg, less to the development of new discoveries than to a careful and intelligent improvement of processes, common to all, and to some priority in the utilisation of resources, at least, as readily within the reach of our manufacturers as those of any other country. Our Dr. FROST's great work is translated into every continental language, and used as a text-book in the technical schools, whilst the improvements lately made abroad are engaging the serious attention of our metallurgists; and I have not the least doubt that the ground which we have lost will be speedily recovered, both by our ironmasters and our engineers, unless, indeed, a return of prosperity should lead to a renewal of the contentions between masters and workmen, which have caused such mischief to both. The cheap carriage of coal and iron on our railways is another important condition of the successful pursuit of our great manufactures. Iron ores are carried in France at rates below 0*g*d. per ton per mile; coal is sent from Westphalia to every part of France, Holland, and Germany at 0*g*d. per ton per mile, including the use of waggons, and these rates are not improvable. Iron is delivered from Seraing, near Liège, into the port of London for 13*s*. per ton, or 2*s*. cheaper than from Wolverhampton. Railway managers are well aware, though under the temptation of immediate returns they sometimes overlook the fact for a time, that nothing tends more to develop general traffic than a low tariff for raw materials."

The iron and coal masters of Great Britain are sensibly aware of the advantages which their continental rivals often possess in the matter of locomotion. Hence their efforts in the past year to secure a reduction in the railway charges. What has been done by the Ironmasters' Association of South Staffordshire was set forth in the report of the committee presented at the Birmingham meeting a few months ago, and thus recapitulated at the Preliminary Meeting:—

"No conclusion has yet been arrived at, or even recommendation made, as the result of the evidence taken before the Royal Commission on Railways, and the anomalies in the mileage charges for minerals and metals are still very great."

Mr. SAMUELSON's recommendations with reference to the course to be pursued to promote technical education in this country need not be reproduced here; they seem to be of a somewhat too extensive character to receive adoption at present.

**NITRO-GLYCERINE.**—In connection with the reference to this material in last week's Journal, Messrs. Webb and Co., the representatives of Mr. Nobel in this country, have forwarded a communication, which is published in another column, pointing out that if the requisite precautions are adopted the danger attending the use of nitro-glycerine is no greater than that of any other blasting agent, and that in quarries where it is habitually used the men prefer it to gunpowder. The letter is well worthy the perusal of all interested in blasting operations.

**CASTINGS.**—In the ten months ending Oct. 31 last year 68,129 tons of castings were exported from the United Kingdom, as compared with 67,843 tons in the corresponding period of 1866, and 72,853 tons in the corresponding period of 1865. The exports would have presented a decline last year but for the extended demand for British castings from British India and Australia. Thus the quantity sent to British India to Oct. 31 last year was 24,658 tons, as compared with 8343 tons in the corresponding period of 1866, and 10,281 tons in the corresponding period of 1865. To Australia the shipments to Oct. 31 last year were 11,076 tons, as compared with 5662 tons to the corresponding date of 1866, and 7073 tons to the corresponding date of 1865. In the ten years ending 1866 the quantity of castings exported from the United Kingdom was as follows:—1857, 72,835 tons; 1858, 78,192 tons; 1859, 81,302 tons; 1860, 74,971 tons; 1861, 75,055 tons; 1862, 66,553 tons; 1863, 83,531 tons; 1864, 58,877 tons; 1865, 91,322 tons; and 1866, 75,455 tons. The value of these exports was as annexed:—1857, 753,334*l.*; 1858, 822,979*l.*; 1859, 795,819*l.*; 1860, 832,638*l.*; 1861, 702,824*l.*; 1862, 574,142*l.*; 1863, 740,310*l.*; 1864, 670,111*l.*; 1865, 792,581*l.*; and 1866, 700,222*l.*

**CONSTRUCTION OF MINE SHAFTS.**—Mr. H. T. RICHARDSON, of Aber Hirnant, Bala, North Wales, proposes a "tubular shaft-casing and life-stair for mines &c.," which consists of two galvanised iron tubes, placed concentrically in a shaft, with a flight of stairs between them; the inner tube is to be used as the "trading" shaft. The inventor remarks that it must be understood that improvements could be made, and double stairs formed by increasing the gradient of them, and entrances could be left to meet the requirements of galleries; great ventilation could be given to the mine, and a free way of escape would always be open to the miners in case of accident. The diameter of the tubes, &c., would have to be regulated by the size of the shaft. The tubes are to be built in lengths of 25 feet, one resting on the other—the lower section having been placed in position, the upper ones follow in succession until the top of the shaft is reached: the extra strength of the lower sections would be regulated by the depth of the mine. The casing would strengthen the sides of the pit shaft and prevent any falls or giving way of the sides. The outer tube should be made stronger than the inner one.

**OLD PIT SHAFTS.**—The question of properly protecting old pit shafts is one in which, looked at merely in a pecuniary point of view, colliery proprietors and managers are largely interested. Heavy fines are frequently imposed in South Staffordshire when unused pits are found insecurely fenced. During the last six years penalties have been imposed amounting to about 568*l.*, and the amount annually imposed in Mr. Baker's district equals one-half of the penalties in all the other districts put together. This is chiefly due to the greater number of pits in South Staffordshire. Mr. Baker's district contains 84 collieries, many of which are not, however, in operation; and within the boundaries of these collieries there are "thousands" of pit shafts of various depths, varying from a pair of shafts to 70 in a colliery. The question of the most secure method of fencing a pit shaft involves serious pecuniary considerations. The Stipendiary for South Staffordshire inflicts heavy fines for offences of this class, even for absence of complete fencing. The difficulty of keeping old shafts free from danger will continue as long as the method adopted is of so incomplete a character. In one recent case timber only had been used, fastened horizontally to uprights; and in two others there were only palings. In a few instances it is necessary for ventilation to keep open old shafts, but usually they may safely be closed. When kept open timber should never be used,

but they should be bricked sufficiently high to place the top beyond the reach of the puffer. When the shafts can be closed, the most effectual method is to cover them with plates of cast-iron.

#### MINING, METALS, AND MINERALS—PATENT MATTERS.

BY MICHAEL HENRY,  
Patent Agent and Adviser, Memb. Soc. Arts, Assoc. Soc. Eng.

Recent specifications comprise one filed by Mr. CHAS. SANDERSON, of Workop, Nottinghamshire, steel manufacturer, for the manufacture or melting of cast-steel. The steel is first brought to a soft or curdy state, by means of heat obtained from combustible gases obtained from the blast-furnace. In this heating no solid fuel is used; the crucible and its contents are heated by the combustion of gas with air. The gas obtained is conducted into a chamber along with heated atmospheric air, the combustion of which produces considerable heat. Into this chamber a number of crucibles—say from 20 to 40—are introduced, and when they are sufficiently heated, they are charged with iron or steel, and subjected to the heat of this furnace until the steel becomes red-hot, or, if required, a thick pasty mass. The crucibles are then withdrawn from the furnace, and placed in small furnaces, constructed and arranged to give out a heat sufficient to completely melt the steel in the crucibles. Two or more crucibles may be placed in one of these second furnaces, which is heated with coke, or coke combined with a heated current of gas, drawn from the generator; heated atmospheric air is also employed in combination with the other fuel.

Mr. THOMAS GREENWOOD, of Leeds, machine-maker, has specified some improvements relating to boring metals in the solid. The patentee remarks that great delay has been occasioned in clearing out the chips formed by the drill in boring into or through solid metal, and defective drilling has often resulted from the accumulation of the borings. In order to avoid these inconveniences, and to ensure perfect lubrication of the drills, the patentee has contrived an arrangement of drilling machinery, wherein the work to be drilled is mounted vertically above a tank containing lubricating material, and bored upwards from its lower end by fixed drills mounted in the tank. The tank he proposes to charge with water or other lubricant, keeping the level of the same above the cutting edge of the drills, and the work will, therefore, be lowered down into the lubricant as the operation proceeds. When boring gun-barrels or other light work, three or more slides or carriers for receiving the work may be conveniently arranged around the central standard. The carriers, being capable of sliding in the vertical guides, will descend as the boring proceeds, or a self-acting motion may be applied to regulate the descent of the carriers when the machine is adapted for heavy work. Rotary motion being given to the central elongated pinion, the pinions around and gear into it will be driven, and thus rotate the work suspended below their respective splines. As, therefore, the work is fed to the drills, the steady boring of the barrels will be ensured.

Mr. CHARLES JONES, of the firm of John Jones and Sons, of William-street Ironworks, Liverpool, has patented an invention relating to coal mining machinery. First, he proposes to form the rails with teeth, like a toothed rack, and to construct a portion of the width of the bearing wheels or other wheels connected with the machine with teeth, to gear into those on the rails, and thereby prevent the machine from moving backward and forward when at work. Secondly, he arranges coal mining machines to run on rails constructed according to the above first part of the invention. For this purpose he employs a ratchet wheel or wheels, and pallet or pallets, on the axle of the carrying-wheels or other part, and he operates these by a reciprocating lever, or other mechanism connected with any convenient working part of the machine. Thirdly, he employs with the rails constructed according to the above first part of his invention double or single acting screw or other jacks, as means for jamming the rails between the floor and roof of the mine. Fourthly, he specifies means for carrying, holding down, and keeping up to their work, coal mining machines generally. One or more steel or other tubes, rails, or bars, raised from the ground by framework, support them at their ends. The said tubes, rails, or bars pass through the framework or other part of the machine, and the machine is made to travel thereon automatically or otherwise. Fifthly, he arranges arms or levers and cutters to plane or pare away the coal or other mineral, so as to form deep channels or grooves therein. The arms or levers are jointed on or to framework, which projects laterally from the machine, and they are operated on by reciprocating motion from the engine, the connection being made to the said arms or levers between their free cutting ends and the joints, or at the back of the said joints. The arms or levers are connected by links, and the cutters act both in the outward and return stroke, cutting the face of the channel or groove in radii corresponding with the sweep from the said joints.

#### FOREIGN MINING AND METALLURGY.

It results from a report issued by the Mons Chamber of Commerce that the coal production of Belgium, which was 9,935,500 tons in 1862, rose in 1866 to 12,774,000 tons, divided as follows over each province:

Province.	1862.	1866.
Hainaut .....	7,795,000	9,851,000
Namur .....	246,500	359,000
Liège .....	1,894,000	2,564,000
Total .....	9,935,500	12,774,000

In 1862 the exports amounted to only 3,487,000 tons, and the interior consumption to 6,529,000 tons, of which 80,000 tons were imported. In 1866 the exports amounted to 4,762,000 tons, and the interior consumption to 7,842,000 tons, of which 187,000 tons were imported. Thus, in five years the coal production of Belgium was increased to the extent of 2,838,500 tons, while the exports only expanded to the extent of 1,275,000 tons, and the interior consumption to the extent of 1,313,000 tons.

The wages of the men employed in coal mining industry in the basin of the Hainaut represented in 1866 an outlay of 1,966,680*l.*, or about 6*s*. 2*d*. per ton of coal produced, while in 1866 the expenditure was 2,296,440*l.*, or about 4*s*. 8*d*. per ton. The expenditure in wages, which presented an increase of 329,560*l.* in 1866, as compared with 1862, thus showed no augmentation, having reference to the growth of the production. The report of the Mons Chamber observes that the net taxable revenue of the collieries of the Hainaut only expanded in the two years to the extent of 440,000*l.*, while the expenditure in wages showed an increase of 560,000*l.*, showing that of late years the Belgian coal worker has been profiting from the increase in the extraction rather more than the Belgian coal owner. The exports of coal from Belgium to France increased in 1866, as compared with 1865, to the extent of 427,159 tons rough coal, and 21,423 tons coke. The exports were distributed over each province as follows in the two years:—

Province.	Coal, 1865.	Coke, 1865.	Coal, 1866.	Coke, 1866.
Armentières .....	2,000	4,300	—	—
Avesnes .....	22,534	2,541	28,728	1,714
Condé .....	955,713	50,491	1,043,470	45,032
Frignies .....	664,120	188,924	688,363	163,314
Givet .....	336,121	117,887	375,335	43,139
Hirson .....	9,268	128	7,740	22
Jeumont .....	1,226,150	43,166	1,422,837	41,632
Lille .....	122,579	2,806	244,860	4,304
Longwy .....	12,802	19,227	15,696	70,495
Rocroy .....	987	253	173	—
Thionville .....	10,442	23,026	6,483	101,302
Valenciennes .....	88,521	36,942	97,933	43,031
Miscellaneous .....	2,381	1,727	1,182	—
Total .....	3,453,589	487,168	3,880,848	508,691

There was a decrease last year in the deliveries from the Liège mines. As regards coke, there was a diminution in the demand from the metallurgical works of the North of France, while Belgian relations with the works of the Meuse, the Ardennes, &c., made some progress last year. The exports to Holland declined from 195,700 tons in 1865 to 137,000 tons in 1866, while, on the contrary, they increased to the Grand Duchy of Luxembourg, as regards coke, from 25,500 tons in 1865 to 35,500 tons in 1866, and as regards coal from 3354 tons to 6662 tons. The exports to Switzerland amounted to 794 tons; this outlet has been almost completely closed by Belgium by the Prussian collieries, since the opening of the Sarre Canal placed them in communication, via the canal from the Marne to the Rhine, with the water communication from Strasbourg to Bale. The maritime exports of Belgian coal again declined in 1866 to the comparatively insignificant total of 7900 tons. Relations with distant markets present difficulties and involve sacrifices, which have rendered Belgian coal workers indisposed to cultivate remote connections, so long as consumers in the interior of France have shown a readiness to take of their products. The report of the Mons Chamber of Commerce now observes, however, that the importation of foreign coal, relatively of little importance in 1866, acquired in 1867 unusual proportions; hence, a maritime exportation of some importance would come all the more materially to the aid of Belgian coal owners. The moment has, then, arrived to provide easy and economical means of shipment at Antwerp. The interior consumption of coal in Belgium amounted in 1866 to 7,842,451 tons, as compared with 7,506,000 tons in 1865; progress was thus realised in 1866 to the extent of 346,450 tons, as compared with 1865; this progress was, however, less than that obtained in 1865 over 1864, which amounted to 380,850 tons.

In connection with French metallurgy, it is important to note a rumour that the French Government proposes shortly to submit to the Corps Législatif a bill for conceding additional lines of railway. The revenue of the Parisian Company for Lighting and Heating by Gas amounted in November to 140,805*l.*, as compared with 111,383*l.* in November, 1866, showing an increase of 7-51 per cent.; and in the first eleven months of 1867 to 1,158,792*l.*, as compared with 1,048,408*l.* in the corresponding period of 1866, showing an increase of 110,384*l.*, or 10-53 per cent. The Grains-sauné United Mines Company commenced the payment on Tuesday of a dividend of 6*s*. 8*d*. per share. The dividend of the Province of Santander Mines and Foundries Company for 1866-7 has been fixed at 1*l*. 6*s*. 2*d*. per share. Meetings are announced as follows:—Cravino Mines Company, Jan. 22, at Paris; Denain and Anzin Blast Furnaces and Forges Company, Jan. 21, at Paris.

A delivery of rails, intended to be devoted to the construction of the Poti and Tiflis Railway, undertaken by a French company, will, it is said, be keenly competed for by the Syndicate of Belgian Forge-masters and the house of De Dordot. The requirements of the line amount to about 25,000 tons of rails, but it is not known at present on what terms the contract will be given out. The tone of the Belgian iron markets has been relatively good of late; prices are maintained, and a fair number of orders have arrived at the works; they are of secondary importance, but in the present state of affairs they are not without influence. The Montigny-sur-Sambre Company, which had only one furnace lighted, has brought a second into activity during the last few days. The Carabinier Colliery Company, at Châtelet, is paying a dividend of 10*s*. 10*d*. per share for the exercise 1867. The Monceau-Fontaine and Martinet Colliery Company is paying a dividend for 1867 at the rate of 2*l*. per share. The Haine St. Pierre Forges, Ironworks, and Foundries Company meeting is announced for Jan. 9, at Brussels.

The foreign copper markets have not experienced much change. At Havre a small lot of 70 tons of Chilean has been dealt in, at 70*l*. per ton. The tin markets have not improved: reports from Amsterdam and Rotterdam note important sales of Banca at somewhat



drooping prices, which closed rather feebly at the last dates at 53½ fls. to 55 fls. in Billiton, quoted at 52½ fls., no important transaction has been recorded. The tin market has shown little animation, and prices have been feeble at Paris; Banca has made 95½ to 96½, and Straits and English 94½ per ton. Under the influence of advices received from England and Holland, the German markets have displayed a less firm tendency; the article remains quoted nominally at previous rates. The lead markets remain inactive; the demand is generally very limited, and prices remain without change. There has not been much doing in zinc at late at Hamburg. A Breslau letter says:—"Our market is without activity, and we can scarcely expect a serious revival in affairs before some weeks; opinion remains, nevertheless, favourable to the article, and if, notwithstanding the depreciation which it experiences on other markets, our producers show themselves little inclined to abate their pretensions, this arises—first, from the fact that existing stocks are inconsiderable; and, secondly, because the consumption of this metal is becoming more important every day. Transactions are moderate at Paris; rough Silesian is quoted at 22½, and zinc from other sources 21½, 4s. per ton.

As regards miscellaneous topics, we may add that we observe that tenders are being invited for the establishment of gas-works at Bucharest. The Madrid Gas-Works Company has announced the payment of a dividend of 15s. per share. Great activity is being displayed in Russia, Austria, and Hungary in the prosecution of new railways. The same may also be said of Prussia—in fact, the Prussian Government is now credited with an intention to introduce a loan of 5,700,000*l.*, to be specially applied to the work of railway development. The Russians have just now got so many railways on hand that it has been sarcastically remarked that they are railway mad. Whether this is the case or no, one thing appears conclusively established—that with a continuance of peace there appears likely to be a large demand for railway iron this year on the continent of Europe.

#### REPORT FROM SCOTLAND.

JAN. 1.—Pig-Iron has met with a good sale since last week, at about 6d. advance, partly on account of the arrangements made by ironmasters to continue to limit their production, and partly, also, on account of stocks in the hands of dealers being short, and necessitating purchases. As to-day is a holiday, we quote yesterday's prices for warrants at 52s. 4½d. cash, and 52s. 6d. a month, sellers; buyers, 52s. 3d. cash, and 52s. 4½d. a month, with rather a tendency to accept buyers' terms. The exports for the week closing yesterday were 8375 tons, against 8620 tons for the closing week of last year, which now reduces the increase of shipments to Dec. 31, as near as may be, to 7000 tons. Makers' iron is—Glasgow, No. 1, 60s.; Coltness, 59s.; Calder, 58s.; Carron, 57s. 6d.; Glengarnock, 57s.; Eglinton, 54s.; all the other Scotch brands, from 55s. 6d. to 53s. for No. 1; No. 3, from 53s. 6d. to 51s. 9d. Manufactured iron is expected, after the holidays are over, not only to be very brisk, but prices are considered as almost certain to advance; and at the present time some one or two firms are behind in their delivery, and refuse further orders unless at an advance of 5s. on plates, and of 2s. 6d. to 5s. on angle iron; and in some instances these advanced prices have been agreed to. This is very cheering for the commencement of the year, and hopes are—though looming in the distance—fondly entertained that this year's iron trade will be more remunerative than the past. Ironfounding is not yet much improved, but the prospect of a plentiful supply of work for the coming spring and summer is becoming pretty certain. The possibility of the moulders having the differences with their employers settled by arbitration is becoming daily less likely to be realised. The chief point of dispute is about the number of apprentices, the Union only "allowing one for every three moulders," while the masters object to any restriction. It will be a pity if the men will not be content to keep their own places, and allow the masters a like privilege.

Coals keep quiet, and are dull of sale, the little business done being divided between coal and ironmasters, both having the article to sell, only the latter has the advantage of getting their hewing done at a cheaper rate per day. The exports show only an aggregate of shipments, foreign and coastwise, of 19,035 tons, against 22,020 tons in the corresponding week of 1866. In the Motherwell district, the colliers are reported to have got the advance of 6d. per day conceded them, bringing up their wages to the maximum of 5s. per day of eight hours. The prices thus range from 4s. to 5s. a day for the short darg.

Shipbuilding, which has been so much depressed during the last year, is likely to be very brisk during this year; and as a very hopeful sign of its coming prosperity, it may be noticed that there is now an amount of tonnage in course of construction equal to the whole amount launched in 1867, and there are orders on the books not included in this estimate. Of the launches since my last is a small steamer, named Rob Roy, of 340 tons, for the Australian coasting trade; she is beautifully fitted up with saloon and other passenger accommodation.

#### REPORT FROM MONMOUTH AND SOUTH WALES.

JAN. 2.—Since last report no improvement has taken place in the Iron Trade of the district, but, if anything, business is somewhat duller, and this is proved from the fact of the hands being reduced at some of the establishments. At present the future prospect is in no way encouraging, still it would be unreasonable to suppose that the depression which has existed for so long a period will continue much longer. The time must come when activity will again reign at the various works, and it is to be hoped that with the New Year an improvement will be inaugurated, and that many years will elapse before anything approaching the present dullness will again be witnessed in this or any other iron-making district in the kingdom. Some large Russian contracts will shortly be in the market, and there is every probability of a fair share falling into the hands of the makers in this district, as Russia for some time has been one of their best customers. There is no alteration to note in continental enquiries. Large orders are expected from America, the number of miles of railway requiring relaying in that country being something enormous, and the news conveying the loss of 50 lives of railway passengers attributes the accident to the defective state of the permanent way, and this may cause a speedier giving out of orders for that country. The home railway companies are still backward in entering into transactions. The Great Western and also the North British are in the market, but not for any very large quantities, and it is well known that the want of public confidence in railway securities has considerably augmented the existing depression. Some weeks ago the Northern Ironmasters gave notice of a reduction of 10 per cent. in the men's wages, and the example was followed by some of the leading makers in this district, and on Saturday last the notices expired. Previous to the expiration of the notices, it transpired that the men would offer no opposition to the proposed reduction, and on Tuesday morning they commenced work as usual, although great dissatisfaction has been expressed, in consequence of the determination come to at the preliminary meeting of the South Staffordshire Ironmasters' Association not to reduce wages. It was generally believed that no reduction would be made in the price of Staffordshire iron, but a strong opinion prevailed that wages would be reduced 10 per cent., and as this has not been done, there is no doubt but that some dissatisfaction will continue to exist in the minds of the workmen of this district for a little time to come. Pigs are not selling so freely as they were a month ago, but this branch, like all others, is dull at this season of the year.

For tin-plates enquiries have not increased since last report, but slackness generally prevails at the close of the quarter. Steam coal proprietors are tolerably well off for orders, and the colliers, as a rule, are fairly employed. The demand for the East has somewhat slackened, but this is owing to the belief that the Abyssinian expedition will be brought to a sudden termination by the liberation of the captives. Should the war be carried on the demand will greatly increase, as the stocks at the mail-packet stations are exceedingly low. France continues a good customer, and enquiries from some of the Mediterranean ports have lately increased. For house qualities the demand is below the average, and the shipments coastwise are not equal to the corresponding period of last year. When the notice of a reduction of wages at the ironworks in this district was given it was generally felt that a corresponding reduction would take place at the collieries, and in consequence of the low price obtained for steam and house coal, the coalmasters have determined on carrying out a reduction, and notices to that effect have been given at all the collieries. In some parts of the district the reduction will be 15 per cent., and in others 10 per cent. The announcement has caused some astonishment among the colliers, but it is believed no opposition will be offered on their part.

Mr. D. Williams, who has been in the employ of Mr. T. Powell, of Llantwit, for the past 10 years, has been appointed manager to the Llantwit Main Colliery Company. As soon as Mr. Williams resigned his old situation, the colliers in the employ of Mr. Powell set a subscription on foot, and on Friday

last they presented Mr. Williams with a purse containing 15*l.*, as a token of respect for his upright service between master and workman ever since he had been among them.

A new tin-works is to be erected at Aberdare by a limited liability company; and as the manufacture of tin-plates has become one of the staple trades of South Wales, there is a fair probability of the undertaking proving successful.

The arrivals at Swansea include—the Clara, from Tilt Cove, with 330 tons of copper ore, for H. Bath and Sons; Gloria de Portugal, from Aveiro, with 96 tons of copper ore, 45 tons of lead ore, and 10 tons of blende, to order; Commodore, from St. Malo, with 100 tons of zinc ore, for Dillwyn and Co.; Antonio Vincent, from Hondekilp, with 675 tons of copper ore, for Richardson and Co.; Faith, from Seetria, with 270 tons of copper ore, for H. Bath and Sons; Mana, from Carloforte, with 335 tons of zinc ore, for H. Bath and Sons; Dædalus, from Quebec, with a cargo of timber, for Elford, Williams, and Co.; Alexandra Clemens, from Carloforte, with 235 tons of zinc ore, for H. Bath and Sons; Mary, from Cherbourg, with 115 tons of iron ore, for R. Crawshaw; Faithful, from Rouen, with 28 tons of zinc ore, for Elford, Williams, and Co.; Eglantine Esther, from Santander, with 186 tons of zinc ore, for the Swansea Zinc Ore Company; and the Queen, from Dieppe, with 100 tons of flint stones, to order.

**REDUCTION OF COLLIERIES' WAGES.**—Notice of a reduction in wages has been given at all the collieries of Monmouthshire and Glamorganshire—a step which has taken some by surprise, while others consider that the position of the trade, more especially the house coal branch, is such that it is a matter of surprise that wages have not been reduced a long time since. During the whole of the year 1867 the prices obtained for house coal have been comparatively low, and the shipments coastwise even show a slight falling off, which is a certain indication of dullness. Up to about three months ago the steam coal trade was equally depressed, the demand not being equal to the supply, and few of the pits were on full time. The war with Abyssinia brought about a favourable change, and for a few weeks business became undoubtedly brisk; this activity, however, did not last long, although there is still a fair demand. In consequence of the means of supply being so much in excess of last year, the increased consumption has scarcely affected prices, and in so far as profitable results are concerned there is little difference between the position of either steam or house coal proprietors. It is not yet quite settled what the reduction will be; in some places it will probably reach 15 per cent., and the average will be at least 10 per cent.

**THE TIN PLATE TRADE.**—The quarterly meeting of the members of the trade was held at the Bell Hotel, Gloucester, on Wednesday, Mr. Woodruffe, of the Machen Works, Monmouthshire, in the chair. There was a fair attendance, taking into consideration that it was the first meeting of the year, which is always rather thinly attended. Among the buyers present were Messrs. Dadelzen and North, London; French and Smith, London; and Nash and Co., Liverpool. From the discussion which took place, it appeared that the demand had somewhat fallen off of late, which is usually the case about the close of a year, and hence it was not wholly unexpected. This falling off is more particularly perceptible as regards American requirements. Advices from the States show that stocks are not heavy there, and consequently, there is no reason to think that the demand will continue as at present; on the contrary, there is every probability of an improvement taking place as the year advances. From the other foreign markets there is no material change to note in the demand. On home account there is an average business doing, and, as is the case abroad, stocks are comparatively light. It was unanimously resolved that no change should be made in prices, and, consequently, they remain the same as for the last quarter. The Factory Act has not yet been put into operation at the tin-plate works, contrary to what was at first expected, its provisions are far more disastrous to the men than to the employers. When its provisions are applied great dissatisfaction will, no doubt, be the result on the part of the workmen. After the meeting the members, as usual, dined together.

**FOREST OF DEAN.**—The Forest ironmasters, while fairly placed just now for orders, have still great reason to complain of bad times. The lowness of the price of iron is rather too practically felt to be either reliable or agreeable, although Christmas time, when folks can, perhaps, put up with almost anything. There is one satisfaction—the ironworks are kept going, and hitherto the furnacemen have not been called upon to submit to any reduction of wages, which is saying a great deal for the masters of the district. There is every prospect that before the year just entered upon shall be, like the one now closed, among the past, an extension of ironmaking will become a fact; it is now in embryo, and, what will be of equal significance, a good supply of mine, without doubt, will be ensured. It is, however, a matter of regret, remembering the local advantages of the district, that an extension of manufactured iron is not at the present probable, or publicly contemplated. The Forest of Dean masters are expecting a long and low price of iron; but, so long as Feakins exists at home, and disorder manifests itself abroad, it is a question of great uncertainty, and causes much anxiety with respect to any immediate improvement taking place. The tin-plate branch is doing a good stroke of business, and the whole of the district mills are kept fully employed. The price, however, is some few shillings per box less than previous rates, which reduction is necessarily accepted. In the household coal branch there is increasing activity, and while other district coals have been recently reduced in price, the Forest maintains its late advance. "Christmas holidays" was generally carried out, very little work being done during the week. Taking the year 1867 as a whole, a better for the Forest of Dean was, perhaps, never experienced. From January to December that is hardly a branch in the district that has reason to complain of inadequate employment, but, on the contrary, would stand in pleasing contrast with preceding ones. There are four gentlemen now in the field seeking the vacant corner shop; all are residents of the district.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

JAN. 2.—By an unfortunate miscarriage, that part of this letter which stated that the Ironmasters' Association of South Staffordshire had determined to make no change in prices or wages did not reach in time for insertion in the *Mining Journal* last week. The decision was in accordance with the recommendation of the leading makers, who form the committee of the trade, and furnish the rota of chairmen, but was only arrived at after considerable discussion. It is by no means universally approved, but it is hard to say, under all the anomalies which the trade presents at the present moment, which course presents the fewest evils. The smaller makers, who must accept the market price, find it hard to pay the present wages, and to buy pig-iron with very little abatement from the prices when trade was better than now.

The North Staffordshire Coal and Ironmasters held their Quarterly Meeting to-day, at the Railway Hotel, Stoke-upon-Trent (Mr. Wragge, agent to Earl Granville, in the chair). The general report was that the trade is much depressed. The following important resolutions were adopted unanimously:—

"That in consequence of the present low selling price of iron, and the great difference in wages, as paid in North Staffordshire and in other competing districts, it is absolutely necessary either to stop the works for the present, or to re-arrange wages on a fair basis; and that, therefore, notices be given on Saturday, January 4, at all the works in North Staffordshire, as follows:—Notice is hereby given that all contracts at these works cease and determine at the expiration of 14 days from this date."

"That the work done by colliers and ironstone miners in this district being very generally paid for by contract, and having from various causes risen to a much higher rate than is warranted by the existing field wage, it is necessary to revise the charter and bargain prices, with a view to their adjustment on the basis of the field wage."

It will be seen from these resolutions that the North Staffordshire ironmasters are no longer content merely to follow the lead of the South Staffordshire Association, whose decision last week to make no change has caused a good deal of dissatisfaction. As there are only a few great masters in the north of the county, they can far more readily act together than even the number of masters, many on a very small scale, in the south of the county.

The failure of Messrs. Ketley and Co., of the Russell Hall Furnace, near Dudley, is announced this week.

The inquest on nine of the twelve men who were killed by the dreadful explosion at the Homer Hill Colliery, near Cradley, on Nov. 11, was resumed by the Worcestershire coroner, on Wednesday, Mr. J. P. Baker, the Government Inspector of Mines, was present, and the workmen were represented by Mr. Breathwell and Mr. Tetlow, of the Miners' National Association. Only two witnesses were called, except the mining surveyor, who produced the plans of the workings. As far as the evidence went, it confirmed the account given in the *Mining Journal*, that the explosion was caused by a great fall of "shutt," which emitted a large amount of gas. It appeared, from questions asked by Mr. Baker, that this part of the workings could not be examined to the extremity. The inquest was further adjourned.

The subject of Technical Education has excited considerable attention during the week. The Birmingham Chamber of Commerce have appointed three gentlemen to attend the conference convened by the Society of Arts on the subject. The same chamber has received a communication from the Government, asking for information on the question, as far as it affects Birmingham, and a special meeting to consider the communication on Monday next. At a *séance* of the Willehall Institution, on Monday evening, the members for the borough of Wolverhampton, which includes the former and several other towns, were present, and the Right Hon. C. P. Villiers delivered an interesting speech on the subject of education, taking a very clear and comprehensive view of its present position, and urging upon the promoters of such institutions as that the great value which would attach to a regular systematic instruction in evening classes, bearing upon the employments which the working artisans pursued.

The Wolverhampton Chamber of Commerce has declined to constitute itself part of a Board of Conciliation to represent the employers, to which they were invited by the Trades Council representing the working men of the town. At a meeting of the Chamber, on Tuesday, Mr. J. Morston presiding, the sub-committee appointed to meet a deputation of the Trades Council reported that the meeting had been held, and after careful consideration of the facts and the reasons brought forward by the deputation, the following resolution had been passed:—Resolved:—"That the sub-committee

having heard the views of the deputation from the Trades Council (which were still more fully explained in a written statement), do recommend the Chamber to accede to a proposition for a mixed committee, which may consider such questions of general interest as may present themselves, and may act as a Court of Conciliation in such cases of dispute of a local character as may be referred to it by both parties." The report of the committee was discussed at considerable length, and it was ultimately resolved, on the proposition of Mr. R. Lees, seconded by Mr. J. Morston,—"That although it is the opinion of this Council that measures of conciliation are the only desirable means of settling trade disputes, they do not feel that the Chamber is constituted for the settlement of such questions in the manner proposed."

The Factories Acts and the Workshops Regulation Acts are now in operation, legally; but, in fact, people are just beginning to perceive the nature of these measures. The enforcement of these Acts in small workshops will involve considerable difficulty. How, for instance, all the boys who put up shutters and run errands are to go home at 6 or 7 o'clock if over 15, or go to school half the day if under, is a puzzling question, and the carrying out of the law at every milliners and dressmakers is a result which seems hard to realise. It is probable it will take some time, and no few penalties, to enforce these statutes. At first, probably, all children under the age when they become young persons—which is now 11, will be 12 next July, and 13 from July, 1870—will be dismissed, rather than the trouble be taken to adopt the half-time system, which will be, in many cases, a hardship.

Mr. H. Johnson has been writing to the papers respecting the recent convictions for having disused pit shafts unfenced, specially complaining that a mine agent has been convicted when the neglect was that of a subordinate. His letter raises several points, as—Should mine agents be liable for such neglect? How should these pits be fenced? and that the extraordinary magistrate of the Wolverhampton district and the Government Inspector of Mines for South Staffordshire and Worcestershire should be removed by Parliament. "A Mine Agent," in a letter to a Birmingham paper upon the one point of how to fence these shafts, Mr. Johnson suggested iron-plates. The other writer says—"I think that these old pits can be made safe at a far less cost by bricking them up from 5 to 6 ft. high, with 9-in. brick and mortar, with a heading course edgewise on the top. This plan I have adopted for some time, and have found it answer much better than arching them over; for, as Mr. Johnson says, the mischievous young archers are often found hammering holes through for the purpose of satisfying their curiosity as to depth, &c.; and there are a few bricks out it is a very easy matter to loosen more, so as to make a larger hole; and smaller children are apt to climb up the sloping side of the brickwork to peep down or to play at little pits by lowering string down, as I have known them do, thereby risking the danger of pitching in head first through the hole, or by their weight causing the bricks to give way under them, thus precipitating them to the bottom wholesale. If the pits are surrounded with timber this is almost sure to be either stolen for some purpose, or pulled off and thrown down the pit; perhaps it may be for spite, as Mr. Johnson suggests, by some of the 'subordinate officers.' But, in the plan I have suggested, if the bricks are well laid in good mortar they will have to be hammered a long time before they can be made very dangerous. I remember, some time ago, being in conversation with the present Inspector of Mines upon the subject, and he approved of the plan I suggest. To do them in this way will cost about 1*l.* 12s. each pit, while the correspondent's plan, with plates, will cost from 4*l.* to 4*l.* 10s. each. The difference in price is very considerable, and allows of their being looked over occasionally. Besides, in a colliery where there are so many of these old pits, some of them are often used for the purpose of ventilation for others at work, which could not be covered over with plates and dirt." This suggestion therefore, seems to be a very sensible and practical one. The correspondence brings out one point very clearly. If these old shafts are so exposed to visits from children, who break down the fences, they surely ought to be made secure. Whether colliery or mine agents should be responsible is open to discussion. That the law cannot descend lower to place the blame must be pretty clear to most who know how difficult it is for courts of justice to deal with subordinates for neglect of duty.

#### REPORT FROM DERBYSHIRE AND YORKSHIRE.

JAN. 2.—The week has been a very quiet one at the principal iron and coal districts in nearly all parts of the country, and Derbyshire is by no means an exception to what may be looked upon as a rule. The Iron Trade, as might be expected, has not at all improved in the last week of the year; still most of the furnaces are in blast, whilst several of the foundries, especially those at Staveley, are tolerably well off. At the last-named place business generally during the year has been well kept up, so that the men have been placed in a much better position than those at almost any other establishment of the same proportions. There has not been a great deal doing at the lead mines for some time past, but, as the Midland has given increased facilities of transit by the opening of the new line from Derby to Wirksworth, a better state of things is anticipated during the present year. In Coal there is a full average business for the season, and the Derbyshire colliers have no reason to complain of the business doing for several months past. The men in the Burton-on-Trent district are still out, and, judging from appearances, are likely to remain so. A great deal of misery and want is to be found in Swadlincote, Church Gresley, and their neighbourhoods, and during the Christmas week Mr. Bass, M.P., gave away three oxen, and the Miners' Association of South Yorkshire 400 tons of coal. Despite these gifts, which fill up a very small gap in the amount of misery prevailing, it is expected that a number of the men will return to work, whilst the collieries will be still further provided with hands from a distance. As usual, business has been very quiet in holiday-loving Sheffield, and very little has been done during the week. In several branches, however, including the heavy armour-plate trade, the prospects are more encouraging than they have been.

The reduction of 10 per cent. at the various ironworks in the district has so far met with considerable opposition, and a strike is likely to be the result; indeed, such may now be said to be the case at Parkgate, the largest establishment in South Yorkshire, so far as puddling furnaces and rolling-mills are concerned. It is questionable, however, whether they will remain out long, as a number of the men are strongly opposed to striking just now, when trade generally is so dull. At Milton and Elsecar the decision of the men has not been made known to the Messrs. Dawes; but, to show that the firm are quite determined to enforce the reduction or to close the works, it may be stated that Mr. G. Dawes informed the men that they could have an extra week's holiday; and the works, with the exception of the furnaces, are now standing.

The Coal Trade has rather improved during the week, and the severe weather of the last few days has caused considerable briskness in household qualities for the London and other markets. Not only by rail, but by water has the improvement been felt, and during the last few days several cargoes have been forwarded to Goole for shipment to London, Wisbeach, Yarmouth, and Shoreham. To Grimsby, also, there has been an increase in the tonnage forwarded there, owing to the arrival of a good many vessels which have been weather-bound. The result has been that the accumulated stocks of steam and house coal have disappeared, and the new year at most of the collieries will be commenced with clear pit-hills. The business doing for Lancashire is quiet, the cotton and other factors being far from busy.

**LECTURE ON COAL MINING.**—On Wednesday evening last, Mr. J. Wilson, the manager of the Darfield Main Colliery, and so well known in connection with the recent experiments with safety-lamps, gave a highly interesting lecture on the working of coal mines, in the Primitive Methodist Chapel, near to the colliery. The subjects embraced the nature and properties of atmospheric air, its distribution and different ramifications, the causes of explosions and the various results. The whole was illustrated by the model of a colliery, showing the workings, with the explosions of gases. The lecture was given in Mr. Wilson's usual clear and concise style, and it is said an effort will be made to induce him to give it in other parts of the district. It may be said that lectures on mining subjects are almost unknown in the South Yorkshire district, although many of the collieries are presided over by men with the ability to instruct, and to enlarge on subjects relating to mining affairs.

Mr. F. N. Wardell, the newly-appointed Inspector of Mines, having in consequence of this appointment vacated the office of viewer for the Plashetts Coal Company, has been presented by the workmen of the colliery, with the joint aid of the owners, with a very handsome testimonial, as indicating the affectionate regard and respect in which he is held, and as a parting token of their esteem. The testimonial consist of a very handsome timepiece, of excellent workmanship, and a substantial and elegantly fitted up dressing-case.

**PRESENTATION TO A COLLIERY VIEWER.**—A handsome testimonial has been presented to Mr. GRAHAM, by the workmen, on the occasion of his relinquishing the resident viewership of Messrs. Pease and Co.'s Waterhouses Colliery, for the more important position of head viewer for Mr. Dickinson, of Shotley Bridge. The testimonial consisted of a handsome gilt timepiece and a purse of money; presentations being at the same time made of a silver tea service to Mrs. Graham, and of a workbook to Miss Graham. The best possible feeling was evinced in making the present; and it appears that the recipient well deserved it. Mr. Graham went to Waterhouses about 12 years ago, to superintend the sinking of the colliery, and as soon as it was opened out and got into working order, he was appointed one of the overseers. This position he held with credit to himself till about three years ago, when the proprietors, to mark their sense of his long and faithful services, conferred upon him the office of resident viewer.

**MINERAL RIGHTS ASSOCIATION.**—The liquidators have declared a second and final dividend of 3s. 4d. per share, making a total return to the shareholders of 15s. 4d. in 1*l.* A general meeting will in due course be held, at which the accounts will be submitted.



**CHONTALES.—WILL THESE GOLD MINES PROVE A SUCCESS?** ANDREWS'S "MINING ARGUS AND STOCK EXCHANGE CIRCULAR," of this day, Saturday, January 4th, 1868, contains Original Articles on the Origin, Rise, and Financial Prospects of the CHONTALES GOLD AND SILVER MINING COMPANY (LIMITED).—A reply to the letter of "A Fellow of the Royal Geographical Society" on the climate of Nicaragua.—The retirement of Capt. Pim from the Directorship of the Chontales Company.—The astounding statements of Dr. Berthold Seemann and Capt. J. Holman, at the Meeting of the Central American Association, where they stated that the "whole of the Chontales Mines must sooner or later be offered for a mere trifle to the proprietors of the Javali."—The financial prospects of Chontales—Railway Traffic and Prospects—Quartz Rock Mariposa Gold Mine—Pestareña—Napoleon's Escape from Elba, and its effect on the price of Consols.—The Electric Telegraph and the Post Office, &c., &c.  
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Prof. TENNANT accompanies his students to the public museums and to places of geological interest in the country. R. W. JELF, D.D., Principal.

#### Evening Lectures.—Royal School of Mines, Jermyn-street.

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By order, C. H. FIELDER, Sec.  
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N.B.—The Transfer Books of the company will close on Saturday, January 18, and will re-open on Saturday, February 1 next.

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This powerful BLASTING AGENT will not explode from a spark, or concussion alone, but requires the combined effect of both, and is fired by a strong percussion cap and ordinary fuse. In a compressed state it may be fired in damp holes, or under water.  
Force, SEVEN TIMES that of the BEST GUNPOWDER.  
It will shiver to pieces cast or wrought-iron, or the toughest teak timber. No tamping is required. It is by far the safest explosive for blasting purposes ever discovered.

#### NITRO-GLYCERINE, OR NOBEL'S PATENT BLASTING OIL.

THE EXPLOSIVE FORCE of this BLASTING OIL is TEN TIMES that of GUNPOWDER, and the ECONOMY and SAVING in TIME, LABOUR, and COST in removing granite and hard rock, in sinking shafts, driving tunnels, and opening forward in close ends is immense. It will not explode from a spark or fire, but from concussion alone, and is consequently much less dangerous than gunpowder or gun-cotton.  
Being heavier than water it sinks to the bottom of a wet hole, no other tamping than water being required.

One charge of this blasting oil, which is now being used with wonderful effect in all the largest slate quarries in North Wales, will displace as much slate rock as four or five charges of gunpowder; and its great force, acting on a large quantity of good slate rock, shakes and displaces it at the natural joints, or cracks, without damaging the slabs nearly so much as the more numerous blasts from any other blasting material would do.  
This invaluable quarrying agent may now be obtained from Messrs. WEBB and Co., Carnarvon, sole consignees from the patentee.

#### HERBERT AULT, ENGINEER,

DRAUGHTSMAN AND PATENTEE'S ASSISTANT,  
VALUER OF MACHINERY, IRONWORKS, RAILWAY  
AND COLLIERY PLANT, and other works; DESIGNER AND CONTRACTOR for every description of RAILWAY and COLLIERY PLANT, CONTRACTORS' and other LOCOMOTIVES, HOT AIR and HOT WATER APPARATUS, &c.

Preparer of models &c., for patentees, and every other assistance given upon the most moderate terms. Estimates given for taking down and erecting works and other machinery.  
Applications addressed to HERBERT AULT, Netherton, near Dudley, will meet with prompt attention.  
N.B.—HERBERT AULT begs to call the attention of gentlemen about to put up greenhouses or conservatories to his large assortment of designs at exceedingly low prices.



**NICHOLLS, MATHEWS, AND CO., ENGINEERS,**  
BEDFORD IRONWORKS, TAVISTOCK.  
MANUFACTURERS OF STEAM ENGINES OF EVERY DESCRIPTION, made on the BEST AND NEWEST PRINCIPLES. We beg more especially to call the attention of the public to the MANUFACTURE of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS OF EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON AND HEAVY SHAFTS OF ANY SIZE. CHAINS made of the best iron, and warranted. MINERS' TOOLS AND RAILWAY WORK OF EVERY DESCRIPTION. ALL ORDERS FOR ABROAD RECEIVE THEIR BEST ATTENTION. NICHOLLS, MATHEWS, and Co. have had 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required.

Messrs. NICHOLLS, MATHEWS, and Co. have always a LARGE STOCK of SECOND-HAND MINE MATERIALS in stock, and at moderate prices.

**JOHN HOCKING AND SON, ENGINEERS, REDRUTH,**  
CALL THE ATTENTION OF COLLIERY PROPRIETORS and others to the present favourable opportunities for the purchase of second-hand CORNISH PUMPING ENGINES and BOILERS at cheap rates. Plans, valuations, removal, &c., of every description of mining machinery undertaken.  
FOR SALE, ONE 22 in. HORIZONTAL, and ONE 24 in. VERTICAL PORTATIVE ENGINE.

**WILLIAMS'S PERRAN FOUNDRY COMPANY,**  
PERRANARWORTH, CORNWALL.  
MANUFACTURERS OF STEAM PUMPING AND EVERY OTHER KIND OF ENGINES, together with BOILERS, PUMP CASTINGS, and MINING TOOLS of every description, of the very best quality. Estimates given for the supply of any amount of machinery.  
London Agent, Mr. EDWARD COOKE, 76, Old Broad-street, London, E.C.

**RAILWAY CARRIAGE COMPANY (LIMITED)**  
ESTABLISHED 1847.  
OLDBURY WORKS, NEAR BIRMINGHAM.  
MANUFACTURERS OF RAILWAY CARRIAGES AND WAGONS, and EVERY DESCRIPTION OF IRONWORK.  
Passenger carriages and wagons built, either for cash or for payment over a period of years.  
RAILWAY WAGONS FOR HIRE.  
CHIEF OFFICES, OLDBURY WORKS, NEAR BIRMINGHAM.  
LONDON OFFICES, 6, STOREY'S GATE, GREAT GEORGE STREET, WESTMINSTER.

**THE BIRMINGHAM WAGON COMPANY (LIMITED)**  
MANUFACTURE RAILWAY WAGONS OF EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.  
EDMUND FOWLER, Sec.  
WAGON WORKS, SMETHWICK, BIRMINGHAM.  
\* \* \* Loans received on Debenture; particulars on application.  
London Agent, Mr. E. B. SAVILE, 67, Victoria-street, Westminster, S.W.

**STAFFORDSHIRE WHEEL AND AXLE COMPANY (LIMITED)**  
MANUFACTURERS OF RAILWAY CARRIAGE, WAGON, and CONTRACTORS' WHEELS and AXLES, and other IRONWORK used in the CONSTRUCTION OF RAILWAY ROLLING STOCK.  
OFFICES AND WORKS, HEATH STREET SOUTH, SPRING HILL, BIRMINGHAM.  
LONDON OFFICE, 118, CANNON STREET, E.C.

**COMPRESSED FUEL**  
(BIRD'S PROCESS)  
CAN BE MADE EVEN BY HAND-PRESS LABOUR AT THE PIT'S MOUTH, or at any WHARF or YARD where COAL or COKE DUST is obtainable.  
The loss of dust by frequent transport, waste of "smalls" from falling unconsumed between the furnace-bars, or being driven up the chimney by the draught, and consequent choking up of flues, is diminished by this process.  
The foreign matter in admixture being but one-half per cent. to the ton, and of a nature to ensure perfect combustion, the coal or coke treated remains unspoil. Drying is very rapid, and no artificial system needed.  
Gluten, cement, and all ingredients needed for mixing are supplied in bags as required. License fee, £10; royalty, 3d. per ton.  
Apply to—  
**JAMES BIRD,**  
No. 2, LAURENCE POUNTNEY HILL, CITY, LONDON.

**UTILISATION OF COAL DUST AND MANUFACTURE OF ARTIFICIAL FUEL.**  
BARKER'S PATENTS.  
**THE LONDON PATENT COAL COMPANY (LIMITED)**  
having purchased the sole rights to these patents throughout the United Kingdom, are now granting licences to coal owners and others for the use of the invention.

The process is simple and inexpensive; the cost of manufacture, including the amalgamating material, being only 2s. per ton.  
The fuel is without smell, and is available for all the uses of ordinary coal. It occupies 33 cubic feet of space per ton only, as against 42, the Admiralty measurement for coal. In the various tests it has undergone it has in every instance beaten similar round coal in evaporative power, weight for weight.  
For particulars of these trials, and every information respecting the patents, apply to the Managing Director, or the Secretary, 26, Martin's-lane, Cannon-street, London, E.C.

**PIG LEAD.**  
**MESSRS. WESTON AND COLLINGBORN SOLICIT ORDERS** for SOFT PIG LEAD, which they are producing of the very best quality. Prices on application.  
WORKS, SWINFORD, GLOUCESTERSHIRE.  
OFFICE, 18, PETER STREET, BRISTOL.

**GREEN SLATES.**  
**GREEN SLATES OF ANY SIZE, and of the CHOICEST COLOUR and QUALITY,** can now be OBTAINED from the DOROTHEA WEST SLATE COMPANY (LIMITED), CARNARVON.  
The "CHARING CROSS HOTEL," "STAR AND GARTER HOTEL" (Richmond), "LONDON-BRIDGE HOTEL," and many other public buildings, are covered with these elegant slates.  
Orders will be executed in regular succession.  
Apply to Mr. THOMAS HARVEY, General Manager, 9, Segontium-terrace, Carnarvon, or 33, King-street, Cheapside, London.

**JOHN AND EDWIN WRIGHT,**  
PATENTERS.  
(ESTABLISHED 1770.)  
MANUFACTURERS OF EVERY DESCRIPTION OF IMPROVED  
**PATENT FLAT AND ROUND WIRE ROPES,**  
From the very best quality of charcoal iron and steel wire.  
**PATENT FLAT AND ROUND HEMP ROPES.**  
SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horfall's patent steel wire), HEMP FLAX, ENGINE YARN, COTTON WASTE, TARPULING, OIL SHEETS, BRATTICE CLOTHS, &c.  
UNIVERSE WORKS, MILLWALL, POPLAR, LONDON.  
UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM.  
CITY OFFICE No. 8, LEADENHALL STREET, LONDON, E.C.

**THE GOLD MINES OF NOVA SCOTIA.**  
Mr. HEATHERINGTON, whose Statistical Reviews of the Gold Mines have been adopted by the Provincial Government and the Paris Exhibition Committee, and were favourably noticed by the London Mining Journal, is PREPARED TO SECURE, VISIT, and REPORT upon MINING PROPERTIES in NOVA SCOTIA for investors who reside abroad.  
Address, A. HEATHERINGTON, box 266, General Post Office, or Somerset House, Prince-street, Halifax, Nova Scotia.

**GOLD MINING IN NOVA SCOTIA.**  
CAPTAIN J. ROBERTS, who has been VISITING the MINES of NOVA SCOTIA the last two months, has come to the conclusion that, with judicious management, Nova Scotia Gold Mines can be made to pay handsome dividends—by the erection of machinery and good discipline, like he was accustomed to in Gongo Soco and St. John del Rey; but Captain Roberts deeply regrets to find that some of his countrymen who came out here got in such disrepute by their reckless mismanagement of the Nova Scotia Gold and Land Company's property, as to leave very little confidence in their ability as mining men, and which, it is well known, they cannot do without. Capt. Roberts has seen more visible gold in the veins here than in any country he has been into.  
Mansion House, Halifax, Dec. 4, 1867.

**SIX POUNDS PER WEEK**  
While laid up by injury, and ONE THOUSAND POUNDS IN CASE OF DEATH CAUSED BY ACCIDENT OF ANY KIND.  
May be secured by an annual payment of from £3 to £6 5s.  
TO THE  
**RAILWAY PASSENGERS' ASSURANCE COMPANY.**  
RAILWAY ACCIDENTS ALONE  
May also be provided against by Insurance tickets for single or double journeys. For particulars apply to the Clerks at the Railway Stations, to the Local Agents, or at the  
OFFICES, 64, CORNHILL, and 10, REGENT STREET, LONDON.  
W. J. VIAN, Sec.

In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Devon.

**IN THE MATTER OF THE COMPANIES ACT, 1862, and of the MOLLAND MINING COMPANY.**—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 30th day of December last, presented to the Vice-Warden of the Stannaries by William Bradley, of Sheffield, in the county of York, a contributory of the said company, and that the said petition is directed to be heard before the Vice-Warden, at No. 18, Thurlow-square, Brompton, in the county of Middlesex, on Tuesday, the 14th day of January instant, at Twelve o'clock at noon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitor, or agent, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., secretary of the Vice-Warden, Truro.  
Every contributory or creditor is entitled to a copy of the petition and affidavit verifying the same from the petitioner, his solicitor, or agent, within 24 hours after requiring the same, on payment of the regulated charge per folio.  
Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before Friday, the 10th day of January instant, and notice thereof must at the same time be given to the petitioner, his solicitor, or agent.

WILLIAM UNWIN, of Sheffield (Solicitor for the Petitioner);  
JOHN GILBERT CHILCOTT, of Truro (Agent of the said Solicitor).

Dated Truro, Jan. 1, 1868.  
In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.

**IN THE MATTER OF THE COMPANIES ACT, 1862, and of the GOONZION MINING COMPANY.**—By the direction of His Honor, the Vice-Warden, notice is hereby given that, on the 14th day of January next, at the Registrar's Office at Truro, in the county of Cornwall, at Eleven o'clock in the forenoon, this Court will PROCEED to MAKE a CALL of SIXTEEN SHILLINGS AND EIGHT PENCE PER SHARE on all the contributories of the said company settled on the List of Contributories under Class A.  
All persons interested therein are entitled to attend at the time and place to offer objections to such call.  
Dated Registrar's Office, Truro, Dec. 31, 1867.

Commercial Sale.  
ON TUESDAY, JANUARY 14, 1868, at half-past Two o'clock prompt, at the Brokers' office, PIG IRON (North of England). For further particulars and conditions of sale, apply to—  
H. J. WALDUCK AND CO., METAL BROKERS,  
1, Market-street, Manchester.

**SOUTH WALES.**  
**THE TON MAWR COLLIERY.**  
LEASEHOLD LANDS AND MINES, in the Parish of BAGLAN, in the County of GLAMORGAN.

MR. JOHN M. LEEDER has been favoured with instructions from the Mortgagees TO SELL, BY PUBLIC AUCTION, at the Castle Hotel, Neath, on Thursday, the 16th day of January, 1868, subject to such conditions as shall then and there be produced, all those VALUABLE LEASEHOLD COLLIERIES called the  
**TON MAWR COLLIERIES,**  
Situate near NEATH, in the county of GLAMORGAN, comprising all the VEINS OF COAL, IRON ORE, IRONSTONE, FIRE CLAY, AND OTHER MINERALS lying under the following farms, viz.:—Abergwenfryd, Blaenafon, Brynecydwyn, Ton Mawr, and Wainlwyd (excepting the stone and stone quarry under Craiddu Plantation, part of the farm of Abergwenfryd, together with SEVEN COTTAGES AND TWO LIME KILNS near the same, on the last-mentioned farm.

The COTTAGES AND MINERALS under the farms of Abergwenfryd, Blaenafon, and Brynecydwyn, are held by lease for the residue of a term of 99 years, commencing on the 24th of June, 1861, at the annual rent of £42 8s. for the cottages, and for the mines and minerals a sleeping rent of £400, redeemable at royalties during the first seven years of the said term of 4d. per ton of 2520 lbs. avoidupois for coal; 6d. per ton for ironstone; and 3d. per ton for stone and other minerals; and for the residue of the said term 6d. per ton for coal; 9d. per ton for ironstone; and 4d. per ton for stone and other minerals, with an average clause of three years. There is also a surface rent of £5 per acre per annum for lands that may be used.

The whole area of these farms, after deducting the Craiddu Plantation, is 436 A. 2 R. 16 P., more or less, the lease gives power to the lessee to determine the term at the end of the term or any subsequent year.  
The MINES AND MINERALS under Ton Mawr and Wainlwyd Farms are held by lease for the residue of a term of 99 years, commencing on the 29th September, 1861, at the annual sleeping rent of £100, redeemable by royalties of 3d. per ton of 2520 lbs. on coal, culm, iron ore, and ironstone, excepting on coal or culm used by the lessee or his agents for domestic purposes, or for working any engines, &c.; and 1d. per like ton of fire-clay converted into bricks for sale, with one year's average clause, and a surface rent of £2 per acre per annum for all lands that may be taken.  
The lease gives power to the lessee to determine the lease at any time on giving 12 calendar months' notice in writing of his intention so to do.

The TON MAWR COLLIERIES have been well and extensively opened and worked by a level merely, and thus drain themselves without requiring pumps, hoisting apparatus, or machinery of any description. They have been proved to the extent of two miles ahead, so as to demonstrate that the coal is free from faults, and they are thoroughly ventilated and perfectly free from fire-damp. The quality of the coal has been long established at the large works in the locality, as well as in the mining districts of Devon and Cornwall.

The estate is intersected by the South Wales Mineral Railway, by which the coal from the several levels upon the property is conveyed to the docks at Britonferry, and to the large tin-plate, iron, and other works established there and in the neighbourhood of Neath, and it is connected with the main line of the South Wales Mineral Railway by a branch railway nearly a mile long, which has been constructed in a superior manner, and is included in the purchase.  
Sale to take place at Three o'clock in the afternoon.  
For further particulars, apply to Messrs. EADY AND CHAMPION, Solicitors, 18, Park-street, Westminster, London; HOWELL CUTHBERTSON, Esq., Solicitor, Neath; or to the Auctioneer, at his offices, 16, Caer-street, Swansea.

**GLAMORGANSHIRE.**  
**VALUABLE COLLIERIES FOR SALE, NEAR NEATH.**  
MR. W. C. MORRIS has received instructions to SELL, BY AUCTION, at the Castle Hotel, Neath, on Wednesday, January 22, 1868, at Four o'clock in the afternoon (subject to conditions of sale to be then produced), all those COLLIERIES, with the VEINS, MINES, and SEAMS OF COAL, and other MINERALS held with the same, commonly called and known by the name of—  
**BRITHDIR, CWMUDU, AND COURT HERBERT COLLIERIES,**  
Situate in the parishes of CADOXTON-JUSTA-NEATH and LLANSAMLET, county of GLAMORGAN, containing in the whole about FIVE THOUSAND FOUR HUNDRED ACRES, together with all the ENGINES, PLANT, and MACHINERY belonging thereto.

Full particulars of the leases, and terms under which the leasehold portions are held, and the conditions upon which the property will be sold, are in preparation, and will be ready for delivery in a few days, and can be obtained upon application to JAMES KEMPTHORNE, Esq., Solicitor, Neath; or to the Auctioneer, Church-place, Neath.  
The colleries may be viewed upon application to J. N. MOORE, Esq., Land agent, near the premises.

**PRELIMINARY ANNOUNCEMENT.**  
**LANCASHIRE STEEL COMPANY (LIMITED).**  
MR. WHEATLEY KIRK is honoured with instructions from the Official Liquidators of the Lancashire Steel Company (Limited) to SELL, BY AUCTION, during the present month, January, 1868, at the Clarence Hotel, in Manchester, the EXCEEDINGLY VALUABLE PROPERTY, constituting their PATENT FILE WORKS AT MANCHESTER, viz.:—Land, buildings, steam-engines, boilers, shafting and mill-gearing, steam, water, and gas pipes, plant, machinery, utensils, &c.  
Full particulars in future papers, or, in the interim, of Messrs. SLATER and BARLING, solicitors, 4, Norfolk-street; or of F. H. JEWELL, Esq., and THOS. BROWNING, Esq., official liquidators, 108, King-street; or the auctioneer, 8, Essex-street, King-street, Manchester.

**MOST EXCELLENT EXTRA STRONG AND NEARLY NEW**  
HIGH PRESSURE HORIZONTAL ENGINE, by those eminent engineers, Messrs. Hick, of Bolton, bore of cylinder, 24 in.; stroke, 4 ft.; with governor, ponderous fly-wheel, in segments, &c.  
Address, WHEATLEY KIRK, engineer, valuer, auctioneer, &c., Manchester.  
P.S.—WILL BE SOLD A BARGAIN, having to be removed immediately.

**PARIS EXHIBITION, 1867—AWARDS.**  
Silver Medal for STEAM CRANES.  
Bronze Medal for DONKEY FEED PUMPS.  
**APPLEBY BROTHERS,**  
EMERSON STREET, SOUTHWARK,  
LONDON, S.E.,  
Engineers and Patentees of STEAM CRANES, DONKEY PUMPS, &c.  
**PATENT DONKEY PUMPS.**

Ram. .... 1½ in. .... 2 in. .... 2½ in. .... 3 in. .... 3½ in. .... 4 in. .... 4½ in. .... 5 in. .... 5½ in. .... 6 in. .... 6½ in. .... 7 in. .... 7½ in. .... 8 in. .... 8½ in. .... 9 in. .... 9½ in. .... 10 in. .... 10½ in. .... 11 in. .... 11½ in. .... 12 in. .... 12½ in. .... 13 in. .... 13½ in. .... 14 in. .... 14½ in. .... 15 in. .... 15½ in. .... 16 in. .... 16½ in. .... 17 in. .... 17½ in. .... 18 in. .... 18½ in. .... 19 in. .... 19½ in. .... 20 in. .... 20½ in. .... 21 in. .... 21½ in. .... 22 in. .... 22½ in. .... 23 in. .... 23½ in. .... 24 in. .... 24½ in. .... 25 in. .... 25½ in. .... 26 in. .... 26½ in. .... 27 in. .... 27½ in. .... 28 in. .... 28½ in. .... 29 in. .... 29½ in. .... 30 in. .... 30½ in. .... 31 in. .... 31½ in. .... 32 in. .... 32½ in. .... 33 in. .... 33½ in. .... 34 in. .... 34½ in. .... 35 in. .... 35½ in. .... 36 in. .... 36½ in. .... 37 in. .... 37½ in. .... 38 in. .... 38½ in. .... 39 in. .... 39½ in. .... 40 in. .... 40½ in. .... 41 in. .... 41½ in. .... 42 in. .... 42½ in. .... 43 in. .... 43½ in. .... 44 in. .... 44½ in. .... 45 in. .... 45½ in. .... 46 in. .... 46½ in. .... 47 in. .... 47½ in. .... 48 in. .... 48½ in. .... 49 in. .... 49½ in. .... 50 in. .... 50½ in. .... 51 in. .... 51½ in. .... 52 in. .... 52½ in. .... 53 in. .... 53½ in. .... 54 in. .... 54½ in. .... 55 in. .... 55½ in. .... 56 in. .... 56½ in. .... 57 in. .... 57½ in. .... 58 in. .... 58½ in. .... 59 in. .... 59½ in. .... 60 in. .... 60½ in. .... 61 in. .... 61½ in. .... 62 in. .... 62½ in. .... 63 in. .... 63½ in. .... 64 in. .... 64½ in. .... 65 in. .... 65½ in. .... 66 in. .... 66½ in. .... 67 in. .... 67½ in. .... 68 in. .... 68½ in. .... 69 in. .... 69½ in. .... 70 in. .... 70½ in. .... 71 in. .... 71½ in. .... 72 in. .... 72½ in. .... 73 in. .... 73½ in. .... 74 in. .... 74½ in. .... 75 in. .... 75½ in. .... 76 in. .... 76½ in. .... 77 in. .... 77½ in. .... 78 in. .... 78½ in. .... 79 in. .... 79½ in. .... 80 in. .... 80½ in. .... 81 in. .... 81½ in. 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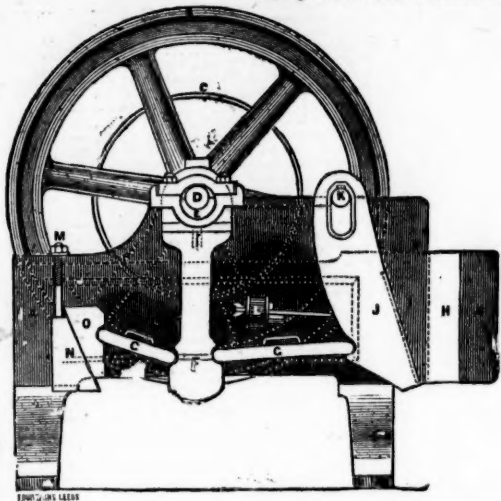
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TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT  
GRINDERS, MCADAM ROAD MAKERS, &c., &c.

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OR ORE CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:-



*The Parys Mines Company, Parys Mines, near Bangor, June 6.*—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.

For the Parys Mining Company, JAMES WILLIAMS.

H. R. Marsden, Esq.

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H. R. Marsden, Esq.

THOS. GOLDSWORTHY & SONS.

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WM. G. ROBERTS.

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SILAS WILLIAMS.

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MEADOW LANE, LEEDS,

ONLY MAKER IN THE UNITED KINGDOM.

### CAUTION!

## BLAKE'S PATENT STONE BREAKER,

In Chancery.

BLAKE v. ARCHER, NOVEMBER 12, 1867.

His Honour the Vice-Chancellor WOOD having found a VERDICT in FAVOUR of the PLAINTIFFS in the above Cause, establishing the VALIDITY of BLAKE'S PATENT, and made a DECREE for an INJUNCTION to RESTRAIN the DEFENDANTS, Messrs. THOMAS ARCHER and SON, of Dunston Engine-Works, near Gateshead-on-Tyne, from INFRINGING such PATENT, and ordering them to pay to the Plaintiffs the costs of the Suit.

ALL PERSONS are hereby CAUTIONED against MANUFACTURING, SELLING, or USING any STONE BREAKERS similar to BLAKE'S, which have not been manufactured by the Plaintiffs. Application will forthwith be made to the Court of Chancery for INJUNCTIONS AGAINST ALL PERSONS who may be found INFRINGING BLAKE'S PATENT after this notice.

SOLE MAKER IN ENGLAND,

H. R. MARSDEN, SOHO FOUNDRY, MEADOW LANE, LEEDS.

TO MINING COMPANIES, MECHANICAL ENGINEERS, MERCHANTS, SHIPPING AGENTS, &c.

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GENERALLY; ALSO FOR

LATHE TOOLS, TAPS, DIES, DRILLS, PUNCHES, CHISELS, SHEAR BLADES, SNAPS, AND BOILER MAKERS' AND SMITHS' TOOLS.

### SOLID CAST-STEEL HAMMERS

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STILLS, PANS, AND GENERAL COPPER WORK,

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As recommended by the Steam-Boiler Associations.

GENERAL STEAM WORK, WHEEL VALVES, SLUICE VALVES, COCKS, &c.  
IMPROVED GAS VALVES.

BABBITT'S AND FENTON'S PATENT ANTI-FRICTION METALS.

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STEAM ENGINE INDICATORS.

Wrought Iron Tubes and Fittings for Steam and Gas Work.

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AND AT  
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CHAPEL STREET, LIVERPOOL,  
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ROPE FOR MINING, RAILWAY, AND SHIPPING PURPOSES.  
NILLA ROPE OF SUPERIOR QUALITY, FIFTY PER CENT. STRONGER  
THIRTY PER CENT. CHEAPER than Russian hemp rope.  
ROPE OF FIRST QUALITY WIRE, and the HIGHEST STANDARD  
LENGTH.

WROUGHT-IRON TANKS, CISTERNS, GIRDERS,  
FUNNELS, &c., Plain or Galvanised.  
CATTLE TROUGHS, IRON CART BODIES, &c., GALVANISED  
OR LEAD SERVICE PIPE, BRASS BALL VALVES, &c.  
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HENRY WATSON AND CO.,  
No. 60, VAUXHALL STREET, LAMBETH, LONDON

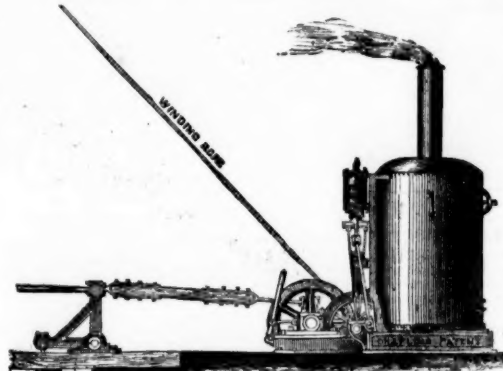
### BICKFORD'S PATENT SAFETY FUSE

Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "IMPERIAL EXPOSITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; and at the "UNIVERSAL EXPOSITION," in Paris, 1867.



BICKFORD, SMITH, AND CO.,  
of TUCKINGMILL, CORNWALL, MANUFACTURERS OF PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—  
EVERY COIL OF FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH THE COLUMN OF GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.

Prize Medal—International Exhibition, 1862.



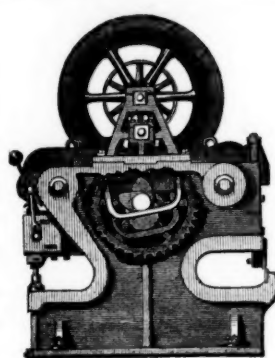
### CHAPLIN'S PATENT PORTABLE STEAM ENGINES, &c., FOR PUMPING AND WINDING.

These engines are SPECIALLY ADAPTED FOR PITS, QUARRIES, &c. They are EXCEEDINGLY SIMPLE IN ARRANGEMENT and STRONG. NO FOUNDATION OF CHIMNEY STALK being NECESSARY, they can be ERECTED or REMOVED with VERY LITTLE TROUBLE or EXPENSE, and are WELL ADAPTED for HOME or FOREIGN USE.

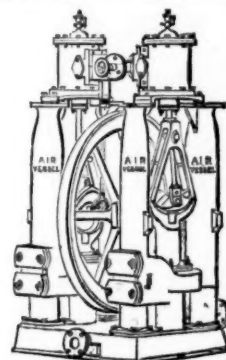
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STEAM CRANES, STEAM WINCHES, CONTRACTORS' LOCOMOTIVES, HOISTING ENGINES, PUMPING AND WINDING GEARING, &c.

ALEXANDER CHAPLIN AND CO.,  
CRANSTONHILL ENGINE WORKS, GLASGOW.



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PATENT DOUBLE CAM LEVER  
PUNCHING AND SHEARING  
MACHINE.  
1 1/4 x 1 1/4 in. x 24 in.—8 tons, £155.  
WORKS,  
EGERTON STREET, HULME,  
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JOHN CAMERON'S  
STEAM PUMPS,  
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SINGLE AND DOUBLE-ACTING.  
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### THOMAS TURTON AND SONS,

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CAST STEEL PISTON RODS, CRANK PINS, CON-

NECTING RODS, STRAIGHT AND CRANK

AXLES, SHAFTS and

FORGINGS OF EVERY DESCRIPTION.

DOUBLE SHEAR STEEL

BLISTER STEEL,

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Locomotive Engine, Railway Carriage and Wagon

Springs and Buffers.

SHEAF WORKS AND SPRING WORKS, SHEFFIELD.

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PROTRACTORS, CASES OF DRAWING INSTRU-

MENTS, SCALES, MEASURING CHAINS AND

TAPES, ASSAYERS' SCALES and WEIGHTS,

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### Contract for Coals for Brickmaking at Portsmouth.

THE COMMISSIONERS for Executing the Office of Lord High Admiral of the United Kingdom of Great Britain and Ireland, do hereby give notice that on TUESDAY, the 7th January next, at Two o'clock, they will be READY TO TREAT with such persons as may be willing to CONTRACT for SUPPLYING and DELIVERING at the Portsmouth Dock-yard Extension Works.

#### THREE THOUSAND TONS OF COALS FOR BRICKMAKING.

A form of the tender and conditions of contract may be seen in the lobby of the Storekeeper-General's Department, Admiralty, Somerset House. No tender will be received after Two o'clock on the day of treaty, nor will any be noticed unless the party attends, or an agent for him duly authorised in writing.

Every tender must be addressed to the Secretary of the Admiralty, and bear in the left-hand corner the words "Tender for Coals for Portsmouth," and must also be delivered at the Department of the Storekeeper-General, Admiralty, Somerset House, accompanied by a letter signed by two responsible persons, engaging to become bound with the person tendering in the sum of £25 per cent. on the value for the due performance of the contract.

By order, **ANTONIO BRADY,**  
Registrar of Contracts and Public Securities.

Contract Department, Admiralty, Somerset House, Dec. 24, 1867.

#### Tender for Coals.

THE STIPERSTONES MINING COMPANY (LIMITED) are PREPARED TO RECEIVE TENDERS FOR STEAM COAL, for six or twelve months. To be delivered at Minsterley Station, Salop. The quantity required will be from 150 to 200 tons monthly.

Tenders to state price per ton, and terms of payment, and to be sent to the company's office, St. John's-hill, Shrewsbury, by Ten A.M., on or before Monday, the 13th inst., marked outside "Tender for Coals."

By order, **EDWARD BRISTOWE,** Secretary.

January 1, 1868.

#### Pumping Engines for Sale.

THE COMMISSIONERS OF POLICE OF ABERDEEN are prepared to SELL the TWO STEAM-ENGINES, with BOILERS and PUMPS complete, at the Bridge of Dee, used in pumping the water to the town, but which are now superseded by the gravitation scheme. They are of the single-cylinder kind, 40-horse power each. The diameter of the cylinders is 40 inches; length of stroke 24 inches; the pumps are 15 inches diameter, and of the same stroke as the cylinders. The beams are about 21 feet in length, with parallel motions at each end. There are three boilers of the wagon-shaped kind, 17 feet long, 6 feet high, and 5 feet wide. They have been worked with a pressure of 7 lbs. per square inch, and two boilers drive one engine.

The engines, which are in good working order, may be seen on application at the Police Chambers; and written offers are to be lodged with the Clerk of Police there, on or before Saturday, 18th January, 1868. The purchaser must be at the sole cost of removing the engines and boilers. The Commissioners do not guarantee acceptance of any offer, unless they deem it satisfactory.

JAMES VALENTINE, Clerk of Police.

Police Chambers, Aberdeen, Dec. 20, 1867.

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The following matters receive special attention:—Detailed reports of the state of trade in all the important manufacturing districts, with latest intelligence of meetings, and price lists of pig and finished-iron. Occasional notices of the Continental and American trades. Condensed information relative to the proceedings of railways and other public companies which have a bearing upon the iron trade. Notices of scientific improvements applicable to the manufacture of iron. Reports on such labor questions as may arise. Notes on Parliamentary Bills bearing on the trade. In addition to the above, leading articles on important topics appear in each issue, and great care is taken that the information contained in the Review shall be thoroughly reliable. The annual subscription is one guinea, payable in advance. Advertisements are inserted on reasonable terms, which may be ascertained on application.—Published for the proprietors, at the Iron Trade Review office, Middlebrough-on-Tees; and at 50, Grey-street, Newcastle-on-Tyne, by M. and M. W. Lambert, printers.

## THE MINING SHARE LIST.

### BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Pershare.	Last paid.
1500	Alderley Edge, c, Cheshire	10 0 0	—	—	9 2 8	0 5 0	Nov. 1867
200	Botallack, c, St. Just	91 5 0	200	—	488 15 0	0 5 0	May 1866
4000	Brookwood, c, Buckfastleigh	1 11 0	—	—	0 7 6	0 2 6	Dec. 1867
1000	Bronfloyd, c, Cardigan	12 0 0	—	—	8 17 0	0 10 0	Nov. 1867
250	Cashwell, c, Cumberland	3 10 0	—	—	0 6 0	0 1 6	Aug. 1866
516	Carlisle, s, c, Newlyn	15 5 7	—	—	13 15 0	0 2 0	Feb. 1866
500	Creechbrowne and Penkelt, c	—	—	—	1 0 0	0 1 0	Oct. 1867
867	Cwm Erwin, c, Cardiganshire	7 10 0	—	—	24 18 0	0 1 0	Oct. 1867
128	Cwmystwith, c, Cardiganshire	60 0 0	—	—	381 10 0	0 2 0	Dec. 1867
280	Derwent Mines, s, c, Durham	300 0 0	—	—	174 10 0	0 5 0	June 1867
1024	Devon Gt. Consols, c, Tavistock	1 0 0	430	400 420	1081 0 0	0 7 0	Nov. 1867
656	Ding Dong, c, Gwynedd	49 14 6	—	—	0 10 0	0 10 0	Sept. 1867
128	Dolcoath, c, c, Camborne	128 17 6	—	—	837 10 0	0 3 0	Dec. 1867
6144	East Caradon, c, St. Cleer	2 14 6	—	—	14 11 0	0 2 0	July 1867
300	East Darren, c, Cardiganshire	32 0 0	—	—	150 10 0	0 2 0	Dec. 1867
128	East Pool, c, c, Pool, Illogan	24 5 0	—	—	417 10 0	0 5 0	Nov. 1867
1906	East Wheal Lovell, c, Wendron	3 9 0	8 1/2	8 1/2	3 11 6	0 10 0	Dec. 1867
2800	Foxdale, c, Isle of Man	25 0 0	—	—	71 0 0	0 10 0	Sept. 1867
5000	Frank Mills, c, Christow	3 18 6	—	—	3 5 6	0 5 0	Feb. 1866
15000	Great Laxey, c, Isle of Man	4 0 0	17 1/2	17 1/2	7 15 0	0 10 0	Dec. 1867
2508	Great Wheal Vor, c, c, Helston	40 0 0	17 1/2	17 1/2	12 8 0	0 7 6	Dec. 1867
1024	Herodfoot, c, near Liskeard	8 10 0	—	—	43 10 0	0 1 0	Oct. 1867
6000	Hington Down, c, Calstock	5 10 6	—	—	0 10 0	0 1 0	April 1866
400	Lisburne, c, Cardiganshire	18 15 0	—	—	498 10 0	0 3 0	Dec. 1867
3000	Mae-y-Safn, c, Flint	20 0 0	27	22 1/2	3 0 0	1 0 0	Dec. 1867
9000	Marke Valley, c, Cardigan	4 10 6	6 1/2	6 1/2	4 1 0	0 4 0	Oct. 1867
3000	Minera Boundary, c, Wrexham	1 0 0	—	—	0 13 0	0 3 0	Mar. 1866
1800	Minera Mining Co., c, Wrexham	25 0 0	180	170 180	223 13 0	0 15 0	Nov. 1867
20000	Mining Co. of Ireland, c, c, c	7 0 0	—	—	0 5 7	0 5 7	Jan. 1867
10000	Mynydd Iron Ore	3 5 0	—	—	0 6 6	0 2 6	Mar. 1866
200	Parys Mines, c, Anglesey	50 0 0	—	—	157 10 0	0 5 0	Nov. 1867
12800	Prince of Wales, c, Calstock	0 12 6	2 1/2	53s. 55s.	0 3 6	0 1 0	Nov. 1867
6000	Prosper United, c, c, St. Hilary	8 14 0	—	—	0 5 0	0 5 0	Feb. 1867
1120	Providence, c, c, c, c, c, c, c	10 6 7	28	26 28	84 2 6	0 15 0	Nov. 1867
512	South Caradon, c, St. Cleer	1 5 0	410	400 410	568 10 0	0 6 0	Nov. 1867
6000	South Darren, c, Cardigan	3 6 6	—	—	0 8 6	0 1 6	Oct. 1867
496	So. Wh. Frances, c, Helston	18 18 9	26	25 27 1/2	372 13 6	1 0 0	Nov. 1867
508	Summer Hill, c, c, c, c, c, c, c	5 4 6	—	—	1 15 0	0 7 6	Dec. 1867
6000	Tinctor, c, c, Pool, Illogan	9 0 0	14	13 14	19 3 0	0 5 0	Nov. 1867
2000	Trumpet Cons., c, Helston	11 10 0	11	—	12 0 0	0 7 6	Dec. 1867
3000	W. Chiverton, c, Perranzabuloe	10 0 0	68	66 68	23 7 6	0 2 0	Nov. 1867
5000	West Godolphin, c, c, Breage	0 1 0	—	—	0 2 0	0 2 0	Dec. 1867
410	W. Wheal Seton, c, Camborne	47 10 0	195	190 195	485 0 0	0 4 10 0	Dec. 1867
512	Wheal Bassett, c, Illogan	5 2 6	80	77 1/2 82 1/2	629 0 0	0 2 0	Dec. 1867
1024	Wheal Friendship, c, Tavistock	20 0 0	—	—	300 10 0	0 10 0	Nov. 1866
1024	Wheal Mary Ann, c, Menheniot	5 4 6	—	—	3 3 0	0 2 0	Nov. 1867
1024	Wheal Mary Ann, c, Menheniot	8 0 0	20	19 20	63 7 6	0 17 6	Dec. 1867
2000	Wheal Rose, c, Scourie	8 0 0	—	—	1 0 0	0 10 0	Feb. 1866
396	Wheal Seton, c, c, Camborne	58 10 0	87 1/2	89 85	252 15 0	0 3 0	Dec. 1867
3000	Whitwell Lead, Clitheroe	0 5 0	—	—	1 0 0	0 10 0	Dec. 1867
17000	Wicklow, c, c, Wicklow	2 10 0	—	—	48 10 0	0 15 0	Oct. 1867

### FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Pershare.	Last paid.
25000	Alamillos, c, Spain	2 0 0	—	—	0 1 0	0 1 0	Oct. 1867
20000	Australian, c, South Australia	7 7 6	—	—	0 10 0	0 1 0	Aug. 1867
15000	Cape Copper Mining	7 0 0	8	—	2 12 6	0 10 0	April 1866
70000	Don Pedro North del Rey	0 14 0	3 1/2	3 1/2	0 10 9	0 3 0	Nov. 1867
25000	Fortuna, c, Spain	2 0 0	—	—	1 7 4	0 2 0	Oct. 1867
20000	Gen. Mining Assoc., Nova Scotia	20 0 0	—	—	23 10 0	0 15 0	June 1867
10000	Gonessa, c, c, c, c, c, c, c	10 0 0	—	—	10 per cent.	—	July 1867
60000	Kapunda Mining Co., Australia	15 0 0	—	—	0 10 0	0 10 0	Nov. 1867
15000	Llaneros, c, Spain	3 0 0	—	—	11 8 4	0 2 0	Oct. 1867
50000	Panuco, c, Chile	3 0 0	1	3 1	10 per cent.	—	Yearly
6000	Peel River Land and Mineral	100 0 0	—	—	—	—	—
80000	Pestarena, c, Italy	2 12 6	2 1/2	—	0 2 6	0 2 6	Mar. 1867
100000	Portgibaud, s, c, France	20 0 0	—	—	4 14 3	0 11 0	June 1867
10000	Port Phillip, c, Cuneo	1 0 0	1 1/2	1 1/2	0 18 6	0 1 0	Oct. 1867
20000	Scottish Australian Min. Co.	1 0 0	1 1/2	1 1/2	10 per cent.	—	Nov. 1867
11000	St. John del Rey, Brazil	15 0 0	5 1/2	5 1/2	81 10 0	0 5 0	Dec. 1867
50000	Victoria (London) [25000 £ pd., 25000 12s. 6d. pd.]	15 0 0	—	—	0 9 0	0 1 0	Jan. 1866
40000	West Canada Mining Co.	1 0 0	—	—	0 19 6	0 2 6	May 1866

### NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
50000	Anglo-Argentine, s, Argentine Republic*	1 0 0	..	..	..
100000	Anglo-Brazilian, g	0 10 0	..	3/4 1/2 %	Nov. 1866
12500	Anglo-Italian, g*	0 5 0	..	3/4 1/2 %	Nov. 1867
2464	Burra Burra, c, South Australia†	5 0 0	..	..	..
25000	Capula, s, Mexico*	1 12 0	..	..	Aug. 1866
30000	Chontales, g, s, Nicaragua*	4 10 0	..	3% 3% 3%	Nov. 1866
12000	Cobre Copper Company, c, Cuba†	43 10 0	..	..	May 1867
10000	Copapo Mining Company, Chile†	16 10 0	..	..	..
10000	Copapo Smelting, Chile†	16 10 0	..	..	April 1866
300	Copper Mines of South Australia* (150 £100 pd., 150 £50 pd.)	150 £70 pd.	..	..	Nov. 1866
15000	El Chico Silver Mining and Reduction Company	5 0 0	..	..	Nov. 1866
8000	English and Canadian Mining Company*	5 0 0	..	..	Fully pd.
40000	Fortune Copper Mining Co. of Western Australia	2 0 0	..	..	Fully pd.
60000	Frontino and Bolivia, g, New Granada*	1 15 0	..	% 16s. 18s.	June 1867
10000	Great Barrier Land, Mining, &c., New Zealand	5 0 0	..	..	Fully pd.
30000	Great Northern, c, South Australia†	1 11 6	..	..	Sept. 1862
7227	Lusitanian (Portugal)†	3 0 0	..	..	..
83000	Mariguita, g, s, New Granada	0 17 6	..	..	Sept. 1867
12500	Naruboda Coal and Iron, India*	6 0 0	..	..	Dec. 1867
61000	New Quebrada, c, Venezuela*	3 10 0	..	..	..
50000	Nova Scotia Land and Gold	1 15 0	..	..	Sept. 1865
15000	Otea, c, New Zealand*	2 0 0	..	..	Fully pd.
10178	Rhenish Consolidated, [6000 £5 pd., 4178 £2 10s. pd.]	..	..	..	May 1866
100000	Rosa Grande, g, Brazil†	0 12 0	..	1/2 1/2 %	June 1867
15000	San Pedro del Monte, s, Mexico*	4 0 0	..	..	Sept. 1866
10000	San Roque, l, Spain	5 0 0	..	..	Fully pd.
30000	Taquaril, g, Brazil†	0 5 0	..	..	Oct. 1867
10000	Terresu, s-l, Isle of Sardinia	2 0 0	..	..	..
13100	United Mexican, s, Mexico†	28 5 0	..	1 1/2 %	..
10000	Unconquer, c, l, Italy†	6 0 0	..	..	..
5000	Val Sassam, s, l, Italy†	7 0 0	..	..	Aug. 1867
15000	Victor Emanuel, c, Italy*	7 0 0	..	..	Fully pd.
30000	Washoe, g, Nevada†	5 0 0	..	..	Fully pd.
30000	Worthing, c, South Australia†	1 0 0	..	..	Fully pd.
75000	Yorke Peninsula, South Australia	1 0 0	..	..	Fully pd.
15000	Yudanamutana, c, South Australia†	3 0 0	1	% 1 1/2 %	Fully pd.